DOCUMENT RESUME

ED 051 822 LI 002 881

TITLE	Urbandoc: A Bibliographic Information System. Technical Supplement 1: General Manual.
INSTITUTION	City Univ. of New York, N.Y. Graduate Div.
SPONS AGENCY	Department of Housing and Urban Development, Washington, D.C.
REPORT NO	Urbandoc-71-2
PUB DATE	71
NOTE	269p.
AVAILABLE FROM	Dr. Vivian S. Sessions, Director, Center for the Advancement of Library-Information Science, City University of New York, 9 East 40th Street, New York, N.Y. 10036 (no charge)
EDRS PRICE	EDRS Price MF-$0.65 HC-$9.87
DESCRIPTORS	Computers, Cost Effectiveness, *Data Bases, Information Processing, *Information Retrieval, *Information Systems, Operations Research, Programing, *Search Strategies, Social Sciences, Systems Analysis, *Thesauri, Urban Renewal
IDENTIFIERS	*URBANDOC Demonstration Project

ABSTRACT

The URBANDOC General Manual is the second volume of the final report of the URBANDOC Demonstration Project. All three volumes are concerned with the applicability of computerized documentation techniques to the literature of urban planning and renewal. The "General Manual" stands midway between the "Demonstration Report" (see LI 002 880), which discusses the goals and accomplishments of the Project, and the "Operations Manual" (see LI 002 882), which goes into the programming system and its operation. The "General Manual" covers: the analytic techniques of the over-all work flow, the computer related techniques, and the use of the data base. The appendix includes the complete URBANDOC Thesaurus (descriptors, structuring, and rotated display). (Author/MM)

ED051822

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Urbandoc/A Bibliographic Information System Technical Supplement 1/General Manual

Vivian S. Sessions, Project Director / Lynda W. Sloan, Systems Analyst

LI 002 881

The Urban Renewal Demonstration Project and the publication of this report were made possible through an Urban Renewal Demonstration Grant awarded by the Department of Housing and Urban Development, under the provisions of Section 314 of the Housing Act of 1954, as amended, to The City University of New York.

The Graduate Division, The City University of New York, 1971

AUTHOR ACKNOWLEDGMENTS

Former Staff

The authors gratefully acknowledge their indebtedness to those former members of the URBANDOC staff who were substantially involved in the development of Project URBANDOC:

Document Analysis: Rose Bratton, Patricia Culkin, Rochelle Field, Clifford Johnson, Edith Ward. *Systems and Programming*: Rita Merlin, Robert Najman, Seena Sperling. *Office Assistance*: Mollie Fasbender, Norma Harris, Catherine Laubach, Regina Lewis. *Keypunching*: Nancy Santiago, Elizabeth Williams.

The authors are particularly grateful to Mesdames Bratton, Field and Sperling for their contributions to earlier drafts of the final report, and to Mrs. Harris for preparing the entire final manuscript for submission to the Department of Housing and Urban Development.

Computing Facilities

For assistance in arranging the necessary computing facilities, the project is greatly indebted to Mr. Edwin Brenman of the New York City Bureau of the Budget and to Professor Herbert Arkin of The Barnard Mr. Baruch College of The City University.

University Graduate Division

This project would have been impossible without the whole-hearted support of Dr. Mina Rees, President of the University Graduate Division. Dr. Rees, the Deans, the Business Manager, and members of the administrative staff all contributed to the success of URBANDOC in so many ways that the authors find themselves overwhelmed in trying to adequately express their thanks.

Research Foundation

The authors are also indebted to The Research Foundation of The City University for its role in managing Project URBANDOC.

Report Design

Dean Marilyn Mikulsky, The City University Graduate Division

PREFACE

Project URBANDOC is reporting on four years of activity as an Urban Renewal Demonstration Project at The City University of New York. The project evolved from a need for improving bibliographic services in urban affairs – and specifically urban renewal – at a time when computer technology was being incorporated into a wide range of information systems. URBANDOC was one of the first of the library-information science systems to deal specifically with the social sciences.

The final report consists of three volumes: the *Demonstration Report,* the *General Manual* (Technical Supplement 1), and the *Operations Manual* (Technical Supplement 2). Each of these is bound separately and intended for separate distribution. For the most general reader who wishes an over-all view of the objectives, features, accomplishments, and conclusions and recommendations of the project, the *Demonstration Report* should suffice.

The *General Manual* is designed to provide the reader with detailed knowledge of the techniques developed for handling the documents according to library-information science practices as developed by Project URBANDOC. While it also provides an overview of the programming system used by the project, the *Operations Manual* should be consulted for detailed systems analysis, programming, and operations data.

The U.S. Department of Housing and Urban Development has been most generous in its assistance of Project URBANDOC, from project submission to final report. HUD's committment to the Demonstration was as important conceptually as it was economically, and the University's indebtedness is thus two-fold. The President and Deans of the University Graduate Division join the New York City Planning Commission and the URBANDOC staff in thanking the Department for having made possible each of these three final volumes, as well as the entire project.

TABLE OF CONTENTS

Introduction / Chapter I 1-8

The Documents 1-2

Pre-analysis 1
Analysis 2
Post-analysis . . . . .

The Bibliographic Records 2-6

Creation 2
Conversion to Machine-readable Form 6
Errors in the Bibliographic Records 6

The Computer System 6-8

The Goals 6
The Programs 7
The Operations 7
Systems Information 8

Alternative Courses of Action 8

Document Identification / Chapter II 9-19

Identification Numbers in Bibliographic Records 9-10

Document Definition 9
External Identification 9
Storage Location 10

URBANDOC Document Numbers: General 10-12

Series Strategy 10
Typical Document Numbers 11
Error Detection and Correction 12

URBANDOC Document Numbers: By Series 13-18

Nongovernmental Names (National) 13
Federal Agencies 14
Subnational Agencies 14
Civic and Miscellaneous Private Groups (Local) 15
Acquisitions and Publications Lists 17
Non-U.S. Materials 17
Periodicals 18

URBANDOC Subdocuments 19

Document Analysis: Descriptive / Chapter III 20-44

General Considerations 20-21

Data Elements, Statements, Segments 20
Data Entries 21
Data Element Summary 21

Proper Name Entries 21-24

Main Entries 22
Added Entries 22
Personal Names 23
Corporate Names 24

Corporate Entries: By Series 25-30
Nongovernmental Names (National) 25
Federal Agencies 26
Subnational Agencies 26
Civic and Miscellaneous Private Groups (Local) 28
Acquisitions and Publications Lists 29
Non-U.S. Materials 29
Names in Periodicals 30
Subdocument Author Names 30

Titles 31-34
Distinctive Titles, Individual and Series 31
Nondistinctive Titles 33
Title Augmentation 33
Non-English Titles 34

Imprints 34-35
Usual Contents 34
Optional Contents 35

Imprints: By Series 35-38
Nongovernmental Publications (National) 35
Federal Agencies 36
Subnational Agencies 36
Civic and Miscellaneous Private Groups (Local) 37
Acquisitions Lists and Publications 37
Non-U.S. Materials 37
Periodicals 37
Subdocuments: Imprint Expansion 38

Abstracts and Annotations of Content 38-39
Form 38
Abstracts 39
Annotations of Content 39
Hyphenization 39

Project Numbers 39-40

Citations 40-42
Legal Citations 41
Literature Citations 42

Acquisitions Information 42-43

Geographic Index Names 43-44

Document Analysis: Content / Chapter IV 45-65

General Considerations 45-52
Analytic Terminology 45
Document Examination 47
Analytic Policies 48
Characteristics of Complete Documents 49
Characteristics of Parts of Documents 52
Abbreviated Analysis 52

Content Analysis: By Series 52-58
Nongovernmental Publications (National) 52
Federal Agencies 53
Subnational Agencies 54
Civic and Miscellaneous Private Groups (Local) 57
Acquisitions Lists and Publications 58
Non-U.S. Materials 58
Periodical Articles 58

Thesaurus 59-65
Subject Thesaurus 59
Geographic Thesaurus 61
Thesaurus Revisions 64

Searching the Data Base / Chapter V 66-74

Manual Versus Machine Searching 66
66

Query Analysis Techniques 68-69

Narrowing the Search 68-69
Specific Descriptors 68
Coordination 68
Subdescriptors 69
Subsets 69

Broadening the Search 69-70
Generic Descriptors 69
Alternatives 70
Overriding Subdescriptors 70
Truncation 70

Mixed Strategies 71

Search Statements 71-74
Logical Expressions 71
Sample Statements 72
Retrieval Reports 73

Systems Modules: Input / Chapter VI 75-104

Thesaurus Module 75-84
Function 75
Tasks 75
Thesaurus File Description 82
Thesaurus Module: Program Inventory 83

Pre-edit Module 85-91
Function 85
Tasks 85
Pre-edit Module: Program Inventory 91

File Maintenance Module 91-104
Function 91
Tasks 92
Document Master File Description 94
Inverted File Description 101
File Maintenance Module: Program Inventory 104

Systems Modules: Output / Chapter VII 105-128
Search Module 105-113
Function 105
Tasks 106
Search Module: The Retrieval Report 110
Search Module: Program Inventory 113
Publications Module 114-125
Function 114
Tasks 114
Publications File Description 123
Publications Module: Program Inventory 125
Local Systems Module 126-127
Search-Publications Interface 128
Processing Cycles / Chapter VIII 129-135
Bibliography / Chapter IX 136
Appendix / Thesaurus Ai-A120

TABLE OF FIGURES

Figure 1.	Generalized Flow of Documents, Records and Processes	3
Figure 2.	Document Worksheet—Identification and Content Analysis Section	4
Figure 3.	Document Worksheet—Content Analysis Section Examples	5
Figure 4.	Principal Cities	16
Figure 5.	Document Worksheet—Content Analysis	51
Figure 6.	Retrieval Report Example	74
Figure 7.	Thesaurus Module: General Logic of Computer Processing	77
Figure 8.	URBANDOC Thesaurus: Display	78
Figure 9.	Statistical Analysis Report	79
Figure 10.	Permuted Thesaurus: Display	80
Figure 11.	Thesaurus Supplement: Display	81
Figure 12.	Thesaurus File Record Layout	84
Figure 13.	Pre-Edit Module: General Logic of Computer Processing	87
Figure 14.	Pre-Edit Listing of the Document Input	88-89
Figure 15.	Formatted Listing of the Document Input	90
Figure 16.	File Maintenance Module: General Logic of Computer Processing	95-96
Figure 17.	Document Master Library Print	97
Figure 18.	Statistical Analysis Report	98
Figure 19.	Inverted File Summary Listing	99
Figure 20.	Inverted File Detail Listing	100
Figure 21.	Document Master File Record Layout	102
Figure 22.	Inverted File Record Layout	103
Figure 23.	Concept of Serial File and Inverted File	107
Figure 24.	Search Module: General Logic of Computer Processing	111-112
Figure 25.	Publications Module: General Logic of Computer Processing	116
Figure 26.	Major Subject Listing	117
Figure 27.	Main Document Listing	118
Figure 28.	Personal Name Index	119
Figure 29.	Corporate and Project Name Index	120
Figure 30.	Significant Title Index	121
Figure 31.	Special Indexes	122
Figure 32.	Publication File Record Layout	124
Figure 33.	Data Processing Components	127
Figure 34.	Editing and Validation	130
Figure 35.	Input Processing	131
Figure 36.	Input Index File Maintenance	132
Figure 37.	Input Index Production	133
Figure 38.	Retrieval Report File Maintenance	134
Figure 39.	Retrieval Report Production	135

INTRODUCTION

The URBANDOC *General Manual* is the second volume of the Final Report series of the URBANDOC Demonstration Project. All three volumes are concerned with the applicability of computerized documentation techniques to the literature of urban planning and renewal. The *General Manual* stands midway between the *Demonstration Report,* which discusses the goals and accomplishments of the Project, and the *Operations Manual,* which goes into the programming system and its operations.

The *General Manual* was designed to service several types of interests: librarians, documentalists, information officers, and systems analysts. Although not all of the individual sections will be equally pertinent to all the users, the entire set of materials is browsable by its entire audience. Where necessary, there are references to related information in either the *Demonstration Report,* the *Operations Manual* or the *Thesaurus.*

Chapter IX in this volume lists the items in librarianship, documentation, and information systems which the project found most significant in the formulation of its own rules and procedures. Any would-be user of the URBANDOC system who is interested either in exploring alternative procedures to those enunciated in this manual or in further refining some of its detailed rules is advised to consult the relevant materials listed there before proceeding further.

The Documents

The total process of creating a bibliographic data base for a computerized information system has three phases so far as the physical documents themselves are concerned: pre-analysis, analysis, and post-analysis. (See Figure 1, page 3.)

Pre-analysis

During the first phase, the documents are acquired and examined to see if they are appropriate to URBANDOC. Since these parts of the total operation are of interest to a broader group of readers than will want to study this Manual, they are handled in the *Demonstration Report.* They are discussed as "acquisitions" and "selection" in Chapter IV, "The Document Base," and again in Chapter VII, "Management and Production." This manual therefore skips the initial activities involved in document handling, and goes directly to the activities that create the bibliographic records.

Analysis

During the analytical phase of the operation, the document analysts are examining the physical materials to decide how they should be represented in the data base. These examinations – and the results as manifested in the bibliographic record – are the subject of Chapter II, "Document Identification," Chapter III, "Document Analysis: Descriptive," and Chapter IV, "Document Analysis: Content."

When the analysis has been completed, the documents themselves can be placed in storage. They may be required for further consultation in the post-analytic period if

required for error correction. Otherwise they will remain in storage until required by a user after the system has "retrieved" them in the form of citations in a bibliographic listing (Chapter V).

Post-analysis

Chapters VI and VII of this manual deal with post-analysis so far as the physical documents are concerned (with possible error correction exception noted above). From that point on, the operations are concerned with machine processing and bibliographic records, which are also referred to as "documents."

The end results are the systems products, the two chief ones being publications (the *Input Index*) and search (the *Retrieval Report*). Prototypes of both are appended to the *Demonstration Report.*

The Bibliographic Records

Creation

The data base of the URBANDOC system is the machine-readable file of bibliographic records, each of them referring to a separate book, article, or government report. These are all documents in the URBANDOC use of the term, although only some of them would qualify as documents in the strict governmental sense of their being official agency reports.

The creation of the bibliographic records is the responsibility of the document analysts, carried on during the phase of the operation referred to earlier as the "analytic." Three separate kinds of analytic tasks are involved: document identification; document analysis: descriptive; and document analysis: content. Although all three are theoretically discrete activities, they relate closely to each other. Documentation identification depends upon descriptive analysis and is therefore done at the same time. Content analysis often turns up additional bibliographic elements for the descriptive part of the record.

The three kinds of activities result in the creation of a worksheet that forms the basis for data entry. (Although it is sometimes possible to skip parts of the worksheet, for purposes of conceptualizing the input it is easier to consider it in terms of the total worksheet.)

The sample worksheet consists of two pages; the first receives the document identification number and the content analysis, and the second is for the descriptive analysis. (See Figures 2 and 3.) (The numbers above the lines are guides to the keypunch operator and refer to columns on the punched card.)

Since the following chapters will discuss the various entries in detail, it is only necessary at this juncture to point out the total amount of information that can theoretically go

GENERALIZED FLOW OF DOCUMENTS, RECORDS, AND PROCESSES

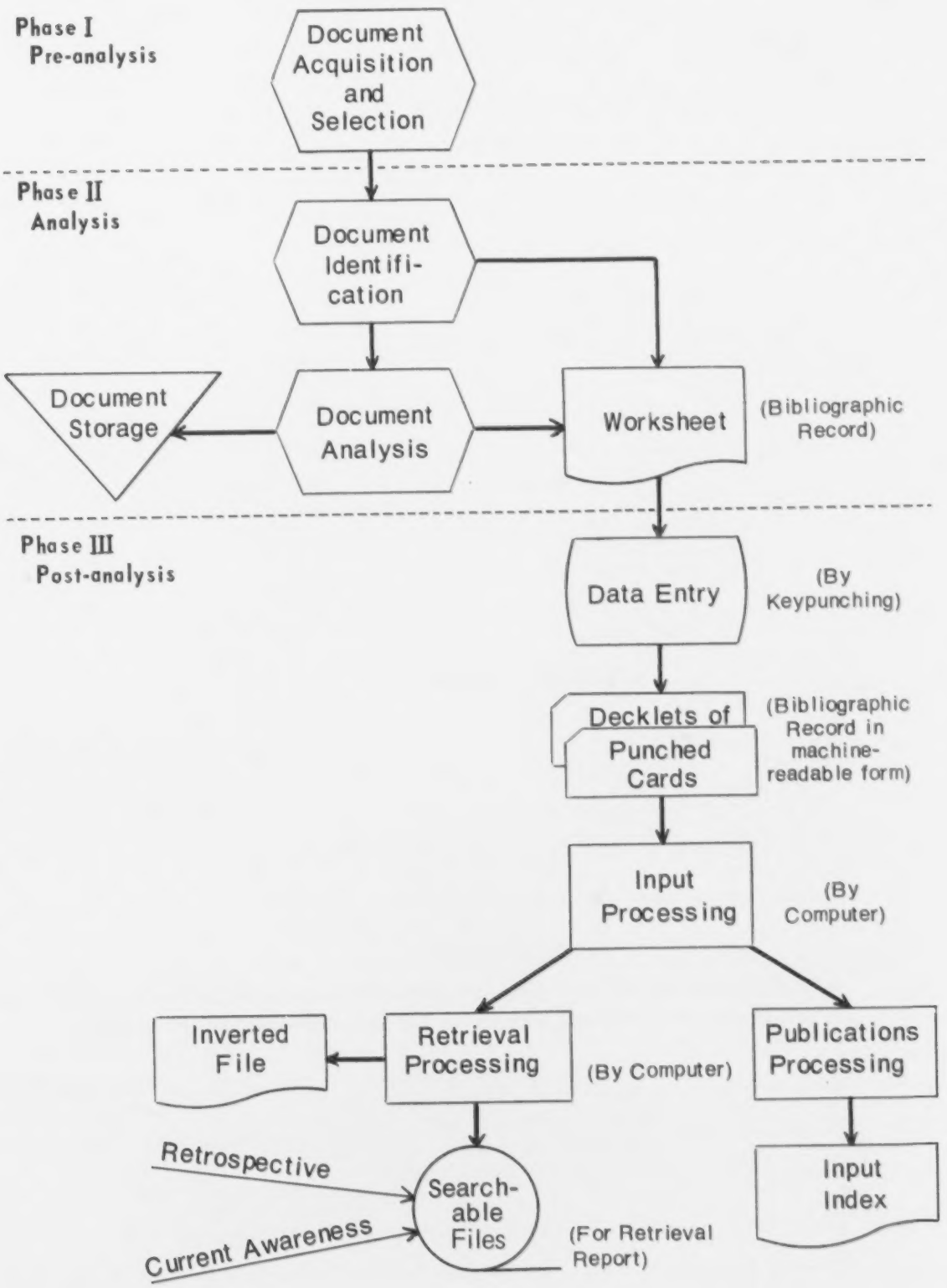


Figure 1

DOCUMENT WORKSHEET – IDENTIFICATION AND CONTENT ANALYSIS SECTION

1 document number (identification) 14

Formal Analysis:

23 46
*UPAP REPORT
#ARTICLES
#SPECIAL REPORTS
*PERIODIC REPORTS
*
*

----(Most-used format terms are preprinted and checked to indicate choice. Less-used terms are written in by analyst on blank lines.)

Date Analysis:

#DATES	196	196	1	1
	publish	entry	content single or upper	content lower

Geographic Analysis:

21 22	23 58
	#GEO
/*	*-
/*	*-
/*	*-

----(Beginning of section is shown here with preprinted coding symbols in columns 21 and 22. Additional lines appear on actual sheet.)

Subject Analysis:

21 22	23 35 56	59 70
	*	
	*	
	*	
	*	
	*	
	*	
	*	

(Beginning of section where subject descriptors are entered. Section comprises entire obverse side on actual sheet. Descriptors to be used as subject headings are marked "SH" in cols. 21 & 22.)

(Subdescriptors are entered in this area.)

Figure 2

DOCUMENT WORKSHEET – DESCRIPTIVE ANALYSIS SECTION

MAIN ENTRY
- 01 personal author
- 02 corporate author
- 03 anonymous

ADDED ENTRY
- 04 acronyms
- 05 joint personal author
- 06 joint corporate author
- 07 consultant
- 08 misc. corporate name
- 09 misc. local place name
- 10 corporate author name x ref.
- 11 distinctive title
- 13 distinctive series title
- 15 non-distinctive title
- 16 French title if available
- 17 German title, if available
- 18 Spanish title, if available
- 21 imprint
- 23 abstract & notation of content
- 25 UPAP project number
- 31 statutory citations
- 36 literature citations
- 56 acquisition information
- 97 geographic index names

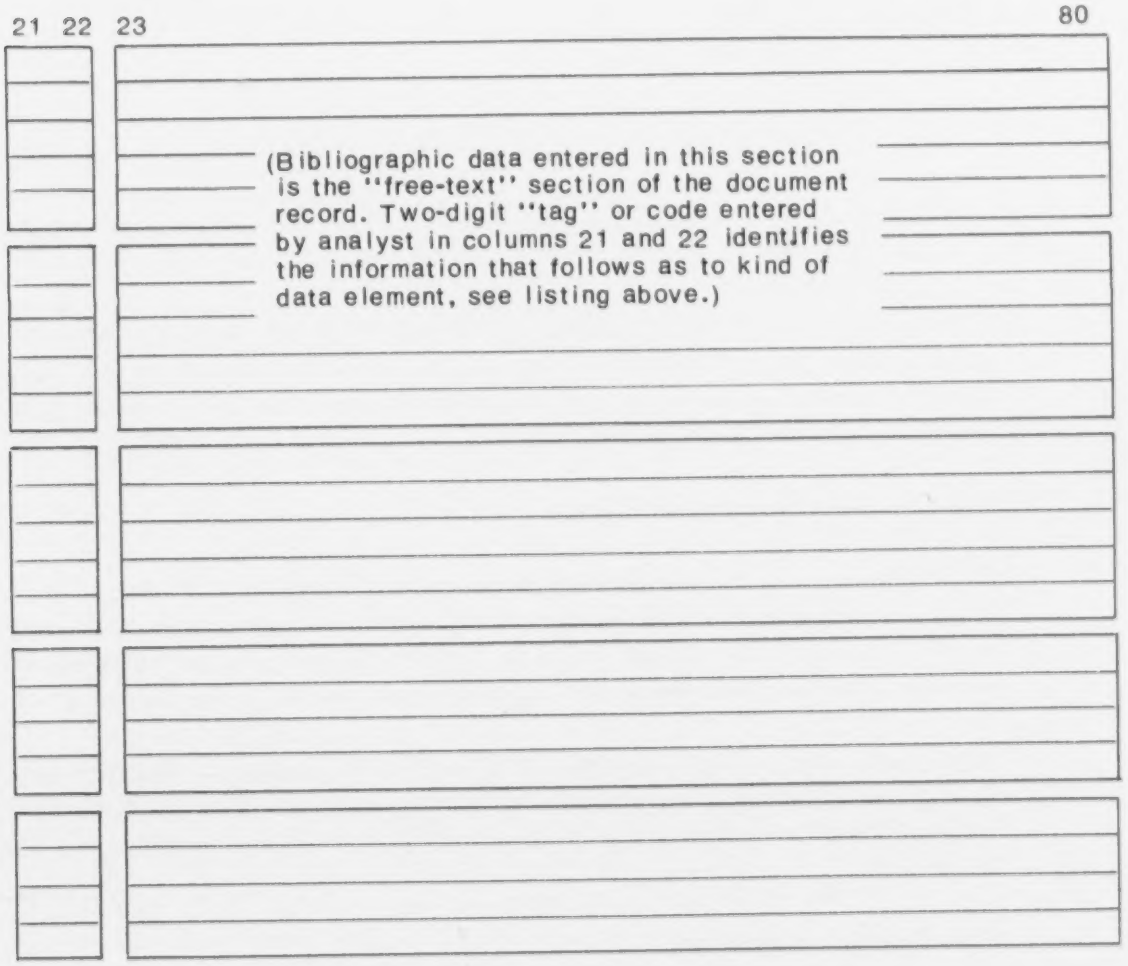

21 22
23
80
(Bibliographic data entered in this section is the "free-text" section of the document record. Two-digit "tag" or code entered by analyst in columns 21 and 22 identifies the information that follows as to kind of data element, see listing above.)

Figure 3

into the individual bibliographic records of the data base. The computer will accept up to 99 units of information about a particular document. Each unit, being variable in length, can contain up to 2200 characters (approximately 350 natural words). This is far more than has been used by the present URBANDOC Project, or is provided for on the sample worksheet. If in the future it becomes necessary to capture greater details about the document base, minor revisions in the input format will permit the capacity of the system to be more fully utilized.

The typical URBANDOC record at present contains 1700 characters of information. About 700 of these are there to satisfy the programming requirements of the computer and do not ordinarily appear in the printed-out bibliographic listing. The way in which the information is entered into the record is a matter for the *Operations Manual.* It includes the full version of the present input worksheet including keypunching instructions for columns 15 through 20. (See *Operations Manual,* Chapter VII, "Document Data Entry.")

Conversion to Machine-readable Form

After the worksheets have been completed (and reviewed), they must then be converted to machine-readable form. The process is called "data entry," and can be accomplished by several methods, the most common of which is keypunching. As indicated earlier, more data may be entered for each bibliographic record than is provided for in the worksheets shown in Figures 2 and 3.

The entire process must adhere to the exacting requirements of the particular programming system. This manual covers the details of entering the bibliographic data insofar as those details relate to conceptual matters. The strictly systems part of data entry is left to the *Operations Manual.*

Errors in the Bibiliographic Records

Error detection and correction procedures are vitally important. Some of the errors occur during the creation of the original bibliographic records before their conversion to machine-readable form. Every reasonable effort is made to detect these manually during the review process, and to send only correct worksheets on for keypunching.

After data entry, error detection and correction becomes a systems function, the procedures for which directly relate to the computer programs and the way they are utilized. Those procedures are therefore handled in the *Operations Manual* as "editing and validation."

The Computer System

The Goals

The basic function of the URBANDOC Project has been to demonstrate the feasibility of applying computerized documentation techniques to the literature used by urban planning and renewal practitioners. Specifically, the goals of the data processing system were:

(1) To build and maintain a Thesaurus in machine-readable form;

(2) To build and maintain the document master file, consisting of bibliographic records containing both the content and descriptive analyses in machine-readable form;

(3) To organize the machine-readable files to be suitable for retrieval and publications purposes;

(4) To establish search programs to query the document reference file;

(5) To establish publications programs to produce an index journal.

The Programs

The system realizing these objectives actually came to consist of five subsystems or modules, a module being defined as all the programs required to meet a specific objective. The final modules were Pre-edit, Thesaurus, File Maintenance, Search, and Publications. The programs included in each module came from a variety of sources: URBANDOC-developed programs, the IBM Program Library and *Engineering Index*. Each source and the role it played is discussed in detail.

URBANDOC used as the core of its system a set of computer programs from the IBM Program Library – CFS, the Combined File Search System. It seemed to fulfill the majority of URBANDOC's requirements in the areas of the Thesaurus, File Maintenance, and Search Modules as well as to allow for a gradual expansion to a total systems approach. This set of programs was designed for the IBM 1401 computer. It could be run on any 1401 with 8000 positions of computer memory, a card reader, card punch, printer and four tape drives.

The Pre-edit and Publications Modules were the ones completely developed and implemented by URBANDOC. URBANDOC did work with the CFS system and added several programs which were not part of the system as distributed by the IBM Program Library. In this respect, URBANDOC considerably enlarged the nature of the Thesaurus and File Maintenance Modules. The Thesaurus Module also includes another program from the IBM Program Library, the program which permutes and prints the Thesaurus. The Search Module was considerably enlarged by the addition of the search subsystem obtained from *Engineering Index*. Throughout the entire system, sorting of the data is performed by SORT-7, another program from the IBM Program Library.

The basic programming languages have been AUTOCODER and COBOL. The CFS programs were done in AUTOCODER, which limited these programs specifically to the IBM 1401. Wherever possible, URBANDOC has programmed in COBOL to facilitate the transition to a third generation computer, such as the IBM 360.

The Operations

URBANDOC has been operating its complete system on the IBM 1401 computer at the

Baruch College of the City University of New York. The configuration of this particular installation is a 1401 with twelve thousand positions of computer memory, a card reader, card punch, printer, four tape drives, and two disk drives. It would be possible to operate most of the system on an IBM 1401 with only eight thousand positions of memory and no disk drives. The disk drives are an optional feature used to facilitate computer searching and program development. The system could also be run on an IBM 1460, an IBM 1410 with 1401 compatibility, or any other computer with both 1401 compatibility and the correct input-output devices. This would of course include the IBM 360 with 1401 compatibility.

Systems Information

Chapters VI, VII and VIII of this manual discuss the computerized components of the URBANDOC Project on a generalized level. They provide introductions to the major data files, the programming modules, and the processing cycles. Program inventories and report formats are included where applicable, as well as brief descriptions of the major processing tasks performed by the computer.

Systems analysts, programmers, and others with more specific information needs are referred to the *Operations Manual.*

ALTERNATIVE COURSES OF ACTION

Every part of the manual that follows represents a course of action that was arrived at after careful deliberation of the consequences. Alternative courses were sought out and examined; where appropriate or feasible, they were also tested. The various rules, procedures, directives and suggestions in the entire URBANDOC Final Report series are not independent items, but interdependent parts of one integrated approach to a bibliographic information system for urban subjects. Together, they represent the project's best judgment as to a total solution.

The alternatives that could be considered by the staff were limited by the administrative constraints of the project, budget and subject coverage being two of the most important.

It would have been interesting – but not feasible – to build several completely different models before deciding on the Combined File System approach to retrieval. It also would have been interesting to go into a detailed discussion of all the alternative courses of action within the systems framework that led to the specifics of this manual and *Operations Manual.* That, too, was impossible in view of the fact that these volumes were to be manuals rather than textbooks on information systems.

Since the manuals represent actual rather than theoretical courses of action, there are some gaps where guidelines for analysis of certain types of materials were provided for, but the materials were not actually handled. This is particularly true for the judicial documents.

DOCUMENT IDENTIFICATION

Identification Numbers in Bibliographic Records

Information systems based on individual bibliographic records must have a way of identifying those records, whether they refer to books, people, or places. Since the full name of the subject of the record is usually too long and sometimes too confusing to serve this function, it is necessary to devise a scheme for record identification. Parcel numbers and social security numbers are examples of identifiers used in land and people files respectively. However, when it comes to published materials, there are no universal identifiers. URBANDOC designed its own system, being guided where possible by relevant ideas in other areas. The system is described in detail for two reasons: first, the method of identifying the records affects many products of the system; second, the method is adaptable to other documentation efforts.

Document Definition

For the purposes of URBANDOC, the term "documents" throughout this manual refers both to formally published materials (books, monographic reports, journals, and other types of serials), and to materials that might be more accurately described as being "issued." The public reports of local, regional, and state governments usually have no publisher other than their issuing agency, but this difference does not eliminate the need for identifying their bibliographic records in the URBANDOC system.

One further possible distinction might be made – between publication (or issuance) in a form that is readable by the human eye and publication in machine-readable form, such as magnetic tape. Although it is conceivable that a future bibliographic system might contain reference to tape files (such as those offered by the U.S. Census Bureau), that is not currently the case with the URBANDOC Project. None of the following discussion on document identification therefore applies to materials other than those in print or near-print, although the documents themselves may be produced in whole or part by computer printout devices or by computer-assisted methods of composing type.

External Identification

The absence of a universal system for identifying published materials has been drawing the attention of documentalists outside of URBANDOC, although the general concern is directed more toward formal publications than to agency-issued reports. The entire problem is serious if bibliographic information systems are to transmit data to each other in machine-readable form. One suggestion advanced at a national level has been to assign codes to publishers. Another has been to use the CODEN (discussed at length below) as the basis for identifying periodicals. URBANDOC has adopted the CODEN as the project strategy in document identification for periodical articles.

Since the capacity of the URBANDOC record is so much greater than presently used, any universal document identifier that comes into being can be added to the system. If necessary it is also possible – either now or later – to incorporate into the record such numbers as those that identify the document for ordering purposes (such as from the

National Technical Information System; or even numbers that relate to subject classification (such as the Library of Congress). However, those numbers cannot substitute for the document identification unless they are unique for each document.

Storage Location

If the total documentation effort involves the storing of the actual physical materials (as was the case with URBANDOC), then it is necessary to decide on a system for storage location. In most libraries, the nonserial materials are arranged by a subject classification number. However, URBANDOC experimented with using the same document identification number to arrange its physical materials in the manual files as it used to sequence the bibliographic records on the tape file. The staff found it very helpful to be able to use one identification scheme to refer to both files.

URBANDOC Document Numbers: General

Affects the first section of the document worksheet:

document number

DNATCUP68HD112

(Although the document identification number is only entered once on the worksheet, it is automatically duplicated by the keypunch operator into every card for the record, starting in column 1. It is also automatically duplicated by a special computer program into another line, together with the proper symbols to make it a descriptor. The function of the document number as a descriptor is discussed in the manual as part of Search Strategy.)

Every bibliographic record in the URBANDOC system must have a unique document identification number which serves several functions. The first of these is to satisfy the requirements of its computer system, which specifies only that the identification be unique to each record, and no more than 14 characters in length. This requirement leaves to the imagination of the managers of the system the actual construction of the identification number, including the decision as to whether it is to be numeric, alphabetic or mixed. "Computer system" as used here refers again to the particular programming package known as the Combined File Search System described elsewhere in the manual. Other systems may have other kinds of document identification requirements.

The document number is used not only at the time of original input of each bibliographic record, but for all subsequent additions, deletions, and corrections. The number also determines the sequence in which they are stored in the system and the sequence in which they will appear in all products of the system.

Series Strategy

It would have been possible to satisfy the minimum function of document identification by a variety of strategies, the simplest of which is straight processing order. This would have resulted in identification numbers that were usable by the computer, but quite meaningless to the people working with the system. The URBANDOC staff preferred to devise a document number that would facilitate their own involvement in and management of the project. The first requirement was therefore, numbers with stand-alone meaning. In examining various alternative arrangements, it was decided that the "Luhn" number used in some IBM systems had the most to offer, since it incorporated clues to the name of the author and title of the work, as well as date of publication.

The nature of the URBANDOC collection suggested one improvement: an initial segregation of the records into series according to types of issuing agencies. The more conventional types of book materials could be handled together in an initial "A" series, and the rest of the alphabet devoted to differentiating between the many types of governmental and nongovernmental reports that make up the bulk of the document base.

One of the many advantages to organizing the URBANDOC files (both computerized and physical) by series is that the browsing capability of both is greatly enhanced. Many parts of the arrangements are strikingly similar to the document arrangements in the municipal reference libraries in New York and Chicago.

Another advantage to the series approach is that the directives for creating the bibliographic records also fall naturally into series. Three sections of this manual are organized according to the nature of the materials. First, of course, is the section on the document identification number itself. In Chapter III, "Descriptive Analysis." The first part is introductory, and nonseries in orientation, but later parts on specific data elements have internal breakdowns by series. The series orientation is also important in Chapter IV, "Content Analysis."

In all of these cases, the rules resulted from an evolutionary process that did not cease the day they were written down. They are more important as indicating a methodology for solving some very difficult problems than as sets of final answers.

Typical Document Numbers

The URBANDOC document identification is alphanumeric. The notation begins with a single letter which is the series letter. The series schedule starts with A, which is the prefix to all document numbers for materials most commonly found in a typical library, chiefly trade books, plus monographs of various sorts.

The notation continues with letters. Characters 2 through 5 in the A series are the first letters of the author's surname (or other main entry), followed by two-letter name initials, as characters 6 and 7. The eighth and ninth characters are the last two digits of the year of publication. Characters 10 and 11 are initial letters of the first two meaningful words in the title. Example:

ALEVIMR69CR – A is the series letter
LEVI are the first four letters of a personal author's surname, Melvin R. Levin
MR are his initials
69 is the publication year
CR are the initial letters of the first two significant words of the title *Community and Regional Planning*

Position of Characters

Eleven characters is the basic length of most URBANDOC document numbers, leaving three possible positions at the end to be used for identifying sub-documents or for handling special problems. The exceptions to eleven characters are noted later in this manual.

In all standard-length document numbers, the numerals for the date always appear in the eighth and ninth positions, as in the example above. If any characters are missing, they are represented by the period. In those series where the basic document number is thirteen characters in length, the date always appears in the tenth and eleventh positions, and missing characters are still represented by periods.

The reason for having the date always appear in the standard position within a series is to facilitate machine manipulation of the records according to date. It would have been even better to have all dates in all document numbers appear in the same position, but that degree of standardization would have required unduly long numbers for the majority of the documents in the system.

Error Detection and Correction

The procedure for detecting errors in the document identification numbers starts with measures for ensuring accuracy and uniqueness.

Since it is desirable to have all publications of one corporate body file together in physical storage as well as in their bibliographic representations, the authority list for corporate authors includes the "root" of the document number. "Root" refers to the characters which precede the date. The same process in descriptive analysis which checks for the form of the entry also checks for that part of the document identification. The date part of the document identification is always the same as the date of publication, and is also checked manually. The characters after the date refer to the title and it is only necessary that they make the entire number unique, not that they be accurate.

Since periodical articles and their bibliographic records are arranged first according to the name of the periodical, the root of their identification is the CODEN, which is used to represent the titles of the periodicals themselves (see full discussion below). This takes care of the bulk of the personally authored materials, but does leave out a provision for authoritative document number roots in the case of monographs whose main entry is personal. However, the possibility of some interspersing here is neither great nor serious in its consequences.

If, despite all precautions, duplicate numbers are indeed assigned, then an error message to that effect will appear during the part of computer processing known as File Maintenance. The entire bibliographic record with the wrong number will be rejected, and it will be necessary to arrive at a new number, change both the physical document and the worksheet, and repunch the decklet.

Urbandoc Document Numbers: By Series

Nongovernmental Names (National)

Books, Monographs

The A numbers are used for a variety of publications, particularly for monographs most properly entered with such corporate authorships as the Ford Foundation, Educational Facilities Laboratories, IBM, etc. Note that in the case of well-known set of initials or acronym, it can be used in the formulation of the document number:

ATAX.F. — For Tax Foundation, Inc. Note the use of periods to fill out character positions

AIBM... — For International Business Machines Inc., IBM being a well-known acronym

The A series is also used for nonperiodical materials that have personal authors as their main entries. These are ordinarily books and monographs, but may include individual papers as speeches and reprints. In such cases, the second through fifth characters of the document numbers represent the first four characters in the author's name, followed by one or two initials:

ARUTHH. — For Herman Ruth (no middle initial)

Professional Societies

It is not always easy to decide, in making institutional entries, as between the A series and the B, which has been reserved for professional societies. When in doubt, URBANDOC inclines toward the professional designation if there are individual members, regardless of the strictness or laxity of the membership qualifications. An error as between placing a book in the A or B series is not a catastrophe in any case, especially if the error is consistent.

In the B schedule, the society always appears as the main entry, and frequently it is represented in the document number by an acronym. The American Society of Planning Officials is represented by ASPO, and its publications all start with the document number BASPO. In this example there is no need to add specific sixth and seventh characters so they are periods. However, the positions are available for use, as in the A series.

Academic Institutions

The C series is for academic institutions where the institution is properly the main entry.

This does not include university presses, which are treated as trade publishers in the A series. It also does not include professional societies which may have their headquarters on a university campus.

In the C numbers, the fifth character in the document identification is reserved for place when the institution has multiple campuses. The sixth and seventh characters further identify departments or institutes within the larger academic community. Example: in CCALBCR, CALB identifies the issuing agency as the University of California, Berkeley, and the CR represents the City and Regional Planning Department on that campus.

Federal Agencies

D — Federal executive agencies, commissions, departments, authorities, etc.

E — Federal legislative agencies, including laws, hearings, reports, etc.

F — Federal judicial agencies, including reports, decisions, etc.

Within these various series, the document numbers are basically similar to the typical document number illustrated above, except that the characters representing the author reflect the strict rules that govern the entry of government agency names in the URBANDOC system. In the D, E, and F series, the entry starts with the significant words in the name, such as Census Bureau. A publication of the latter therefore has as its number DCENS. . 68CU indicating a 1968 document with the title *Census User Dictionary*.

Subnational Agencies

(Governmental bodies in the U.S. below the federal level)

G — State executive agencies

H — State legislative agencies

I — State judicial agencies

K — Municipal agencies (executive, legislative, and judicial)

L — County agencies, single county jurisdiction; joint county-town agencies

O — Metropolitan multicounty or regional agencies; councils of governments

State Agencies

In the G, H, and I series for state documents, the second through fifth characters are the state, which URBANDOC represents by the first four letters except where that would cause confusion. (Mississippi is MISI to distinguish it from Missouri, which is MISO). The

sixth and seventh characters are the significant initials of the agency. A publication of the New York State Office of Planning Coordination is therefore identified as: GNEWYPC.

Municipal Agencies

Municipal names presented a problem because of duplication. In the case of principal cities (Figure 4), the main entry is by city alone. The document number for those cities starts with the series letter K and then adds the first four letters of the city name: KCHIC, for Chicago.

For all other cities, the rule for descriptive analysis says that the name of the city should be followed by the abbreviation for the state. This is inverted in the document number as follows: The series letter K is followed by the four letters designating state, as in state documents, and then by two characters for the city: KILLIDE for Decatur, Illinois. Since this kind of document number starts out by being two characters longer than the one for principal cities, the only way to keep the K series uniform in length for date position was to lengthen the entire basic number to thirteen characters, and standardize the date in the tenth and eleventh positions. With periods filling in for blanks, the number KDALLPC . . 68EP represents a publication of the Dallas Planning Commission; and KALABAUPC68NA representing a publication of the Auburn, Alabama Planning Commission.

County Agencies

County names also presented problems in the way of duplication. The solution for all numbers in the L series was to proceed from the series letter directly to the state and then to the county, similarly to the case of nonprincipal cities. The basic number is therefore always thirteen characters long: LCALISMRP68PO is a publication of the Regional Planning Commission of San Mateo County, California.

Metropolitan and Regional Agencies

Variations and problems abound in the O series. URBANDOC procedure is to structure the document number to emphasize the geographical location inherent in the agency name. The second through fifth characters are the abbreviated state or city designations (the latter in the case of principal cities). Other significant words in the agency name are picked up for the initials in the sixth and seventh characters. It appears possible to limit the document number of regional and metropolitan agencies to a basic eleven characters, with the date in the eighth and ninth positions, similar to the typical document number: OCONNCR68RR is for a publication of the Central Connecticut Regional Planning Agency, and OBALTRP68RT a publication of the Baltimore Regional Planning Council.

Civic and Miscellaneous Private Groups (Local)

The P series is used for a variety of local civic organizations. Because of their diversity, neither the descriptive analysis nor the formation of the document number can always be handled in ways that are completely consistent from document to document. In general, the four characters after the P indicate the city, and the next two stand for the actual

PRINCIPAL CITIES

Akron	Denver	Milwaukee	St. Paul
Albany	Des Moines	Minneapolis	Salt Lake City
Albuquerque	Detroit	Nashville	San Antonio
Annapolis	Duluth	New Haven	San Diego
Atlanta	El Paso	New Orleans	San Francisco
Atlantic City	Fort Wayne	New York	San Jose
Baltimore	Fort Worth	Newark	Savannah
Birmingham	Grand Rapids	Norfolk	Scranton
Boston	Hartford	Oakland	Seattle
Brooklyn	Honolulu	Oklahoma City	Spokane
Buffalo	Houston	Omaha	Syracuse
Charlotte	Indianapolis	Philadelphia	Tacoma
Chattanooga	Jacksonville	Phoenix	Tallahassee
Chicago	Jersey City	Pittsburgh	Tampa
Cincinnati	Kansas City	Portland	Toledo
Cleveland	Long Beach	Providence	Trenton
Colorado Springs	Los Angeles	Richmond	Tucson
Columbus	Louisville	Rochester	Tulsa
Dallas	Memphis	St. Augustine	Wheeling
Dayton	Miami	St. Louis	Wichita

Figure 4

name of the organization. Eleven basic positions do accommodate discrete numbers for the different bodies.

Acquisitions and Publications Lists

Acquisitions and publications lists of a serial nature present special record problems, as well as special information potential, and they have therefore been segregated into a special Q series. This series was established for documents of a distinctive significant bibliographic scope issued regularly, whether by public agencies or private bodies. Acquisitions lists are most often issued by libraries, and are used by other libraries in book selection. Publications lists, to be included here, would have to be such documents as checklists of state publications. The Q series is not used for subject bibliographies, nor for advertising materials issued by individual publishers.

Each serial type title is entered in the URBANDOC system on its first arrival, and then is re-entered once annually. The record is a serial title entry, and its identification is only nine characters in length, including the prefix Q.

There are several possible ways to form the document number in the Q series. If the publication has a CODEN, a six-character special identification assigned by the American Society on Testing and Materials (see section on periodicals), then the CODEN is used. If there is no CODEN, then one is obtained providing the publication is properly a periodical and not a house organ. If the latter, a CODEN-type identification is devised for series with distinctive titles. If the list has no distinctive title, the document number root can identify it with the issuing agency. Examples of these three formations of document identification follow:

QRPCP-A69 –	RPGP-A is the CODEN for the title, *Recent Publications on Governmental Affairs,* issued by the Joint Reference Library.
QCOG.W.69 –	COG.W. is a title identification standing for *Cog Wheel,* prepared by the Library of the Metropolitan Washington Council of Governments.
QCHICMR69 –	CHICMR is an agency identification for the Chicago Municipal Reference Library.

No letters or periods normally follow the date digits, although positions ten through fourteen may be used to indicate indexes, cumulated editions, or other special features if necessary.

Non-U.S. Materials

Some non-U.S. materials in English are handled together with U.S. materials of a general nature. Foreign trade books and other monographs, professional society publications and academic publications are intermingled with their American counterparts in the A, B, and C series. The same is true of the Q series and with the periodicals.

However, it would obviously be inappropriate to try to fit the official publications of other countries with those of the United States at the various jurisdictional levels. Three series were therefore established for such non-U.S. materials. They are R, T, and U. The United Nations and its affiliated international agencies, such as the World Health Organization, are designated by the R prefix. Documents and publications from non-U.S. national governmental agencies are given the T series prefix, e.g., the Ministry of Housing and Urbanism of Chile is TCHILHU. Non-U.S. subnational government agency publications, generally issued by provincial or city units, receive the U series prefix; e.g., UVANCE is the document root for a publication issued by the Vancouver, British Columbia, City Engineering Department.

When URBANDOC was established, there was a decision to exclude all materials that were not published either originally or simultaneously in the English language. Under these circumstances, there is presently always a main entry in English, and the document number is derived from the English-language name of the issuing agency. There are therefore no diacritical marks or other language problems in the document number. Even if the URBANDOC system were to be expanded to include materials not published originally or simultaneously in English, presumably there would be an English translation of certain elements of information, including the main entry. Whether or not the translation is made in-house is irrelevant for the purpose of determining the document identification.

(During the last year of the Demonstration Project, the URBANDOC staff did some experimenting with non-English titles, work which is described later in this manual. The same methodology could be applied to non-English-language versions of the main entries.)

Periodicals

Periodical articles are identified first by the series letter Y and then by the name and date of the periodical in which they physically appear. The name of the periodical is represented by a six-character CODEN, a notation system developed by the American Society for Testing and Materials for identifying all of the world's periodicals. The eighth and ninth positions of the identification number represent the date, the tenth and eleventh identify the author, and the twelfth and thirteenth are initials of the first two significant words of the title:

YAIPJ-A69MTHA —

Y is the series letter;
AIPJ-A is the six-character CODEN for *Journal of the American Institute of Planners;*
69 indicates 1969;
MT for the author, Thomas A. Morehouse, and HA for the significant words of the article title "Highway Land Acquisitions in the United States."

This arrangement for the Y series enables machine-readable bibliographic records to follow in the same sequence as the annual volumes of the periodical title. Slight variations

occur where the physical volumes span a calendar year, but these variations do not seriously impair the ability of the user to go from the bibliographic record to the physical document.

The Y series is also used for making the annual bibliographic records of the series titles themselves. The 1969 volume of the *Journal of the Institute of Planners* would be identified as: YAIPJ-A69, a number that corresponds to those given serial title entries in the Q series.

Since all Y document numbers incorporate the CODEN, it follows that the series is not appropriate for minor, local,or temporary titles. Newsletters in particular, generally do not belong in the Y series, but are handled with the other materials of their issuing agencies.

URBANDOC Subdocuments

When document analysis in depth requires the use of subdocuments, the identification number of the main document may be expanded to the fourteen-character limit. If the main document number has eleven characters, subdocument numbers are three digits, beginning with 101. If the main document number has thirteen characters, the subdocuments are assigned a letter beginning with A. (Should subdocuments exceed the twenty-six letters of the alphabet, digits one to nine may then be used to continue.) In either case, the subdocument number is always the last element of the complete document identification, e.g.: DNATCUP68HB101 or KNEWYHPCL68NNA.

Subdocuments can be used for the separation of a larger work by any of the following: volumes, chapters, sections, exhibits, testimony, appendices, etc. The larger work can be a multi-volume set, with each individual volume treated as a subdocument. It is also possible to have a multi-volume situation in which one physical volume is the most significant one in the set, and the others are appropriately categorized as subdocuments. A third type of larger work is exemplified by the one-volume text or report with internal subdivisions.

The decision to subdivide a work into a principal document and subdocuments can be made at any one of the three points in the total analytic process: document identification, descriptive analysis, or content analysis. In the case of a multi-volume set, the necessity usually appears during document identification. However, any decision involving subdivision (either affirmative or negative) is subject to the same review process that is applied to all of document analysis.

DOCUMENT ANALYSIS: DESCRIPTIVE

General Considerations

The descriptive analysis of documents in the URBANDOC system is similar to the library procedure called "descriptive cataloguing." It involves identifying the document at hand as to author, title, imprint, and a variety of "added entries," such as joint author. In the traditional library, the information is used to create a catalogue card, to which will be added the subject classification number and the subject headings. The card is then copied, the number of copies equaling the number of times the card is needed for filing in the library catalogue trays. After all procedures are completed, the document is represented by a number of cards, one filed by author, another by title, etc.

In automation the descriptive analysis initiates bibliographic records which can be "read" and manipulated by the computer. The possibilities for producing bibliographic indexes are extensive, provided three conditions are met: (1) similar elements of descriptive information, such as author or title, can be extracted from the different records and sorted together (as in an author index); (2) the data elements retain, throughout the sorting, their identification with the documents to which they refer; and (3) the data elements are so entered in the record as to facilitate alphabetic listings.

Data Elements, Statements, Segments

The descriptive part of document analysis in the URBANDOC system fulfills all three requirements. There is an input worksheet for each document, and each line of the worksheet contains the document identification number (reproduced automatically). Each discrete element of information is entered on a separate line (or group of lines if necessary), called a "segment." Each segment is also identified as to type of information by an appropriate tag. For example, each segment of personal author information incorporates the tag 01.

URBANDOC has not been alone in devoting considerable attention to the problems involved in correctly isolating, identifying, and entering the various elements of the bibliographic record. (See the citations in Chapter IX which are concerned wholly or mostly with data elements and data statements.) The report of the United States of America Standards Institute lists several hundred possible data elements, and discusses their entry in the form of data statements. The manual from Project INTREX at MIT uses the term "field descriptions" in connection with the creation of the bibliographic records for its augmented catalogue. Forty-nine kinds of fields were provided for in the sample worksheet, and space left for the addition of new fields.

In this framework, URBANDOC appears quite conservative, with twenty-three different segments indicated as possibilities in the Descriptive Analysis section of the worksheet (Figure 3). What these data elements are, and how they are entered in the record is the concern of the rest of this chapter of the manual.

Data Entries

An example of entry form is that all personal names are entered last name first. However, not all the rules are that easy to propound. In creating records for computer sorting and alphabetizing, the idiosyncrasies of the machine must be carefully considered. One of them is that it can only operate with data and with programs, it cannot perform the kind of editing that a human file clerk does when following instructions to ignore abbreviations (or the reverse).

If the amount of attention paid to descriptive analysis in the URBANDOC system seems large, it is because of the extensive publications program. The *Input Index* provides bibliographic citations by a complete set of special listings: personal and corporate author, several kinds of titles, report numbers, places, and, of course, subjects. Another system, less interested in such specialization, could content itself with less regard for the details of descriptive analysis. However, all bibliographic systems designers are cautioned against complete disregard for this part of the input procedure, lest they construct a system with poor or even useless reporting capabilities.

The URBANDOC practices in this area of its responsibility are not all of its own devising, but rather a combination of conventional library rules, nonconventional indexing procedures from several advanced projects in documentation, and finally the modifications necessitated by the peculiar nature of published materials in urban affairs.

Proper Name Entries

Affects the following lines on the document worksheet:

21	22	23 — 80
01		Doe, John J.
02		New York. City. Housing and Development Admin.
03		Architectural Forum
04		NAHRO
05		Smith, James G.
06		New York. City. Model Cities Committee
07		Community Planning Associates
08		New York State Urban Development Corp.

(The numbers in columns 21 and 22 are entered by the document analysists in accordance with the principles established below. They are the "tags" or "codes" which identify the information to follow as to kind of element.)

Main Entries

The main entry of a document is the one which establishes its authorship. There are two kinds of proper names that can be main entries: personal and nonpersonal, usually called corporate. Most trade books and periodical articles have main entries that are personal names, but for much of the material in the URBANDOC system the responsibility for authorship is more properly institutional. The main entry is therefore a corporate name.

Frequently there are several names associated with a document, and the choice for main entry depends upon the primacy of that name in the authorship or associated relationship, such as issuing agency. The URBANDOC preference for corporate rather than personal main entries derives from two principles: 1. Government documents, in particular, represent agency policy rather than personal convictions. 2. When the agency is listed as the main entry, it does not have to be repeated in the imprint statement, as will be seen later.

When several corporate names appear to compete for main entry, the choice is for the one with legal responsibility for the document.

The three kinds of main entries, and their tags, are as follows:

01 Main Personal Entry
02 Main Corporate Entry
03 Anonymous Entry

The 03 tag is used when neither personal nor corporate responsibility for the document can be properly assigned. In this case, usually in a periodical article, the name of the preiodical itself is used as the main entry, and tagged as an 03. When the records are used to produce author indexes, the 03 entries are eliminated, but in other listings they ensure a complete bibliographic record for every document.

Added Entries

Although there is only one main entry per document, the decision favoring corporate main entries does not leave individual authors without recognition. They become added entries. There is no restriction on the number of added entries, nor whether they will be personal or corporate.

The six present kinds of added entries, and their tags, are as follows:

04 Acronyms
05 Joint personal author
06 Joint corporate author
07 Consultant
08 Misc. corporate name
09 Misc. local place or project name

Another possibility would be:

10 Funding agencies

Acronyms are never used alone to indicate authorship in the URBANDOC system, only as an added entry if there is serious likelihood that some user will seek access to the file by the acronym rather than the full corporate name. Ordinarily acronyms would be nationally significant. There is no limit to the number of acronyms or added entries that can be assigned to a document other than that imposed by reasonableness and economy.

That the 05 and 06 tags are called added entries should be interpreted as meaning that those persons or institutions are necessarily of secondary importance to the document. For example, persons prominently mentioned in the text are also considered for inclusion as 05's. Theoretically, such entries are really subject headings, and should be tagged differently, but a change in procedure in this regard is not contemplated at present. URBANDOC does not presently include names that appear on the document for courtesy purposes only, such as a mayor.

In the case of 07 entries, consultants are included in the bibliographical data if the document indicates a substantial responsibility on their part. Ordinarily only firm names are used; individuals, academic institutions, and government agencies functioning in a consulting capacity are entered with the other personal and corporate names, the latter as an 06 or 08 entry (the difference between the two tags is explained in sections immediately following).

The last added entry is a miscellaneous local place or project name, tagged 09. It is a miscellaneous category, which accommodates proper name information that cannot be accommodated by any other device, and which appears useful for listing purposes in an index. Renewal-area project names are a typical example.

Personal Names

All personal names associated with a document are entered in the bibliographic record in inverted form, to facilitate alphabetizing. Certain other entry rules apply in order to expedite the computer filing. The first is to eliminate the space or apostrophe after MAC, MC, or O. (Not all computer character sets have the apostrophe.) The second is to eliminate any end punctuation except for the period following an initial or abbreviation. Examples of these two rules:

McFarland, M. Carter
OHarrow, Dennis

Ordinarily the way in which names appear in the publication itself is considered as authoritative, although the analysts are free to check the system for prior usage, and to substitute full names for initials when previously so entered. (Obvious misspellings can also be corrected.) However, the project does not maintain a formal authority list for personal names, as they are not access points for computer searching in the present URBANDOC system. Minor differences in style may therefore turn up occasionally in the personal author indexes, such as inconsistencies in the use of "Jr."

Identification of Relationship

In entering these personal names, however briefly or fully they are given, the coding (01 or 05) makes only one kind of distinction: between those that constitute main entries and those that are associated in some manner that is not specified. This association can be that of joint author, translator, editor, compiler, etc. Other systems, particularly Project INTREX, have made available to their analysts many different tags by which they can indicate a variety of relationships between the personal name entry and the document. It is possible to go so far, for example, as to indicate "thesis adviser." The advantage of indicating the name–document relationship with the use of tags is that the system can then produce specialized indexes of translators, compilers, thesis advisers, etc. Although such capability does not presently appear essential to the URBANDOC system, another urban information system might consider its applicability to its own peculiar problems, especially in an academic situation. The fact that more complicated coding slows down the input process should also be considered.

It is also possible to indicate the relationship of the personal name to the document by another device: inserting the word "editor," "translator," etc. or its abbreviation, into the record immediately following the name itself, "Jones, John J., ed." Such additional relationship word identifiers can always be added without systems changes, but the analysts should be cautioned on the necessity for consistency. Computer filing does not recognize that "trans," "trans.," and "translator" after a name should be treated identically for sequencing purposes in a listing.

Corporate Names

The principles behind corporate name entries in the URBANDOC system adhere to those for personal names in some cases and differ in others. The differences result from the complicated nature of corporate names, and the necessity to provide uniformity, not only for aesthetic and other filing purposes, but to organize the file so that all the publications of one corporate body can be accessed by one correct form of the body's name.

Authoritative Entries

The concept of the authoritative entry, or the authority file of library descriptive cataloguing was introduced to cope with these problems. In its fullest application, a record would have to be kept of the authoritative, or correct, form of every corporate name; this record to be constantly maintained and updated. The descriptive analyst would check the authority file before entering a corporate name on the bibliographic worksheet. The URBANDOC solution to such involved and expensive procedures has been to: (1) reduce the number of corporate entries that have to be in authoritative form, (2) make the entries as simple as possible, and (3) make the system generate its own authority file as a spinoff from document file maintenance.

URBANDOC reduces the amount of authoritative analysis by restricting it to corporate entries, the main ones, which are tagged 02, and those that are tagged 06. Other corporate entries, nonauthoritative in form, are the consultants (07) and a miscellaneous group which are 08's. However, all corporate entries should follow as closely as possible the policies for the formation of the 02's and 06's.

Theoretically it would be possible to have the computer check all corporate names against an authorized list, much as it now checks the descriptors against the vocabulary tape. Such an edit program is not part of any of the present module designs, and would require considerable additional computer processing, but could be incorporated if necessary.

Punctuation and Abbreviation

Although the document analysts make their corporate name entries with standard punctuation, errors are sometimes made in keypunching. In addition, it is not possible to standardize the way the operator will end the lines. These deviations, if not corrected, will cause problems when the computer is used to produce corporate name listings. In some cases, the computer will be unable to recognize duplicates; in others, it will sequence them incorrectly. The solution has been to write a program which, in effect, causes the computer to ignore punctuation, extra spacing, hyphens, and the ends of lines in handling corporate names for listing purposes.

Abbreviations, however, still have to be entered with strict adherence to standardization. The following are always used: Admin., Bd., Bur., Dept., and Div. Committee and Commission are always spelled out, to avoid confusion.

Corporate Entries: By Series

Nongovernmental Names (National)

Both personal and corporate names constitute the main entries in the A, B, and C series of documents; they may also appear as added entries throughout the rest of the bibliographic record. If a corporate name appears prominently in the document itself, it cannot be unthinkingly accepted as published. The name must be unique, compact, and meaningful, as well as compatible with other forms of the same name and with similar names. It may therefore be necessary for the document analyst to modify the form of the name in the best interests of documentation. Obviously, such modifications should be made with restraint and with due regard for the integrity of the system. Certain measures to ensure uniformity affect style more than integrity. For example, URBANDOC eliminates the initial article, but retains "Inc.," the latter always being abbreviated.

The addition of place identification to a corporate name, as is frequently required by the Library of Congress or COSATI rules, is used less frequently in URBANDOC procedures. If the corporate body is well known its actual location is left to the imprint line. This approach applies equally to associations, businesses, foundations, hospitals, nonprofit enterprises, etc. The place name is added only when necessary to avoid possible confusion between two bodies with identical or very similar names, or to indicate subnational offices or chapters: "Joint Reference Library, Chicago," "American Institute of Planners. New York Metropolitan Chapter."

Care should be taken when indicating other subdivisions of large corporate bodies. In the case of International Business Machines Corp. it is probably essential to add "Data Processing Div." but it is not as necessary to enter specific committees of most professional organizations. Such subdivisions are subject to frequent change and they make an authority list unduly complicated.

Academic institutions present more problems in terms of uniform entry, inclusion of place name and subdivision, and these problems are likely to continue as colleges and universities increase in complexity and geographical spread. It is obviously necessary to identify individual colleges within a university and departments or institutes within colleges as well as to differentiate between campuses. The following entries indicate how URBANDOC handles such typical problems:

McGill Univ. School of Architecture
British Columbia. Univ. Urban Affairs Div.
Southern Illinois Univ. Edwardsville. Public Administration and Metropolitan Affairs Program
California. Univ. Berkeley. Center for Real Estate and Urban Economics

The City University of New York presents a particular form of entry problem since it is a municipal academic institution with many campuses and divisions. In the interests of direct entry the form used is, "City Univ. of New York. City College. [or name of whatever the subdivision] Civil Engineering Dept."

Federal Agencies

With federal agencies, the URBANDOC rule is to get to the meaningful parts of the name as quickly as possible. For executive departments and their large subdivisions the following examples indicate the approach:

Housing and Urban Development Dept. (note the inversion, and elimination of "U.S.")

Labor Statistics Bur. (not: Labor Dept. Bureau of Labor Statistics)

Regional offices of executive departments are entered as follows: "Housing and Urban Development Dept. Region 6, San Francisco."

For the legislative branch of the federal government and its agencies such as commissions, committees, etc., the following are typical forms of proper-name entry:

Banking and Currency Committee. House
Economic Committee. Joint. Congress
Government Operations Committee. House. Intergovernmental Relations Subcommittee

Corporate author entry for federal laws is indicated thus: "Congress. 89th. 1965."

Subnational Agencies

State

Subnational government documents comprise the area of bibliographic control least liked by most librarians, and an area least considered by other documentation centers. URBANDOC was therefore very much on its own in devising workable rules for entering the names of these agencies.

State executive documents (G series) are the easiest to handle. The entry starts with the full name of the state, followed by the name of the department (except in New York State where many offices are part of the executive department). Major subdivisions of the department follow, but not minor subdivisions. The reason URBANDOC does not follow its federal agency form of entry is that distinctive subdivision names are less constant in state governments. Examples:

Indiana. Commerce Dept. Planning Div.
New York. State. Office of Planning Coordination
North Carolina. Conservation and Development Dept. Community Planning Div.

Municipal

The largest series in the file is K, or city documents. Principal cities are entered with the name of the city, followed by a period in the case of official agencies, and then the agency itself. URBANDOC does not enter subdivisions unless they are large and well established.

In the case of all other cities, the city name is followed by the standard abbreviation for the state. The major differences between URBANDOC and Library of Congress practice in this regard is that URBANDOC's list of cities which do not require the state is somewhat longer, based on the 1960 Census.

County

County, or L series, publications are entered first under the name of the county, followed by the abbreviation "Co.," and then the abbreviation for the state. Bi-county documents are also entered in the L series, and as consistently as possible in terms of form. The rest of the entry follows standard practice. The locality of the agency goes into the imprint.

Metropolitan and Regional

The greatest challenge to consistent and meaningful main entries arises with the documents issued by metropolitan and regional agencies, those in the O series. It is often difficult to make clear distinctions between governmental, quasi-governmental, and non-governmental status. URBANDOC classifies borderline cases as O type main entries if they are sufficiently broad in scope. The more difficult problem of deciding between metropolitan and regional responsibility is deferred to the content analysis of the documents.

Many of the O agencies have names that are so uninformative they could refer to a host of possible agencies throughout the country; others are distinctive to everybody, but meaningful only to the initiated. They therefore require the addition of city and/or regional identification. When considering this modification, the document analysts must keep in mind the alternative of relying on the imprint segment of the record to indicate locations.

At one end of the spectrum are the names that require no augmentation:

Metropolitan Washington Council of Governments
Association of Bay Area Governments

The second name is less definitive than the first, but URBANDOC proceeds on the assumption that users of its system will correctly identify the agency with the San Francisco area. The imprint segments will, of course, contain "Washington, D.C." and "Berkeley, Calif." respectively.

Only a fine line distinguishes the second example above from a name like "Central Lane Planning Council." However, URBANDOC decided that in the latter case there was less likelihood that most users would be able to place the agency within a thousand miles of Eugene, Oregon. The entry – admittedly debatable – presently reads: "Central Lane Planning Council, Eugene, Ore."

When there is no hint of locality to distinguish one metropolitan agency name from another, an addition of some kind is mandatory. If the name starts with "Bi-" or "Tri-," it is entered as it appears, followed by city and then by the state abbreviation if necessary to be consistent with the K series:

Tri-State Transportation Commission, New York
Tri-County Regional Planning Commission, Lansing, Mich.

Those regional agencies' names that are even less distinctive, if that is possible, are preceded by adding a geographic identifier. The Regional Planning Council that is located in Baltimore is entered as: "Baltimore. Regional Planning Council." If Baltimore had been other than a principal city, then "Baltimore, Md." would have preceded the official name of the agency. Despite all the rules, it was not easy for URBANDOC to resolve the entry problems of some regional agencies located in New York. The compromise between consistency and common usage resulted in the following forms:

Regional Plan Assn., New York
Metropolitan Regional Council, New York

The rules for adding state designations in the K and L series determined their addition in the following entries:

Nassau-Suffolk Co., N.Y. Regional Planning Bd.
Bay County, Fla. Area Council

The abbreviated form of the state applies only to added state designations, not to those already spelled out in the official form of the name: "Southern California Assn. of Governments."

Civic and Miscellaneous Private Groups (Local)

Civic groups, main entries in the P series, present another challenge to meaningful and consistent descriptive analysis. Those that incorporate city or state names in their own

names are entered directly as given:

Crime Commission of Philadelphia
Reston Virginia Foundation for Community Programs

Those whose self-appointed jurisdiction is less clear may be profitably augmented by city at end: "Back Bay Architectural Commission, Boston."

However, the reverse decision seems more appropriate for such organizations as local Chambers of Commerce, where the name has no stand-alone value apart from the geographic identifier: "Schenectady Co., N.Y. Chamber of Commerce."

In the case of organizations serving counties or smaller cities, the state designation is added as in the main entries of the K and L series. The Newark Council for Open Housing in Ohio becomes: "Newark, Ohio. Council for Open Housing."

Acquisition and Publication Lists

In the Q series, the title of the publication is the main entry for the annual serial entry record, not the issuing body. This is consistent with general practice for serial title entries. The issuing body is an added corporate name (tag 06). When the library in the organization is the subdivision responsible for publishing the list, that information is also part of the 06 added entry: "Port of New York Authority. Library."

Non-U.S. Materials

International Agencies

The corporate 02 form of main entry for materials issued by agencies and offices of the United Nations or its affiliated international organizations, comprising the R series, is similar to that for U.S. governmental bodies. The initials "U.N." do precede the agency name where appropriate although "U.S." is eliminated for domestic federal agencies as noted above. U.N.-affiliated organization names are entered in direct form, e.g., "World Health Organization." Place is entered in the imprint statement whenever the document is issued (a) by a regional office or (b) when the main office is not located in New York or Geneva.

Non-U.S. National, Sub-National Agencies

In general, URBANDOC procedures for treatment of corporate author names given for U.S. political jurisdictions and agencies are applicable to non-U.S. governmental agencies in the T and U series. In descriptive analysis, URBANDOC began using the initials "U.K." for United Kingdom instead of "Gt. Brit." in 1968. For national government agencies and subnational agencies through the provincial level, the name of the capital does not appear in the main entry or imprint.

Municipalities which are not capitals or well-known internationally are modified by the addition of appropriate geographical identification in the same manner as are U.S. towns.

In the case of documents issued by countries, the place name is entered as part of the imprint and the country may be added in the main entry. Typical non-U.S. governmental agencies found in URBANDOC files as main-entry examples:

Canada National Park Commission
U.K. Housing and Local Government Ministry
Ontario, Economics and Development Dept.
Hampshire Co., Emg. Planning Council

Non-U.S. Civic and Public-interest Groups

Criteria for entering the name of non-U.S. organizations and institutions in the V series is similar to that used in the B and P series (see above), particularly in ragard to the place name in the imprint or as part of the main entry.

When the issuing organization has a geographically distinctive name, the place need not be added to the main entry or imprint, e.g., "West London Architectural Society." If the name is not distinctive, place may be added to the main entry, e.g., "Ford Foundation Advisory Planning Group, Calcutta." When the name of the country appears as part of the organization name, the place of its offices must be added in the imprint.

Names in Periodicals

In the case of periodical articles appearing in the Y series, the form of the main and added entries for names seldom pose problems not already discussed. Frequently there may be reasons to include the agency with which the author is affiliated as an added entry (06), especially if the author is presenting an official point of view. This decision is left to the document analyst.

When Y series records are being created for annual serial titles, they follow the procedures given for Q series records, e.g., the title is the main 02 entry and the agency is the 06 added entry. If it appears desirable in either case to identify the librarian or editor, then an 05 added entry is made and it must be entered before the 06 in the worksheet.

It sometimes seems more appropriate to treat an issue of a periodical as a whole from the standpoint of content analysis. In such cases, the title of the periodical is used as an anonymous author (03), and individual personal authors are all added 05 entries. An alternative is to enter the special issue editor as the main entry (01) with the individuals as added entries.

Subdocument Author Names

Since a subdocument always relates to some part of a larger work, the main entry in the subdocument identifies the authorship of the part being analyzed. Usually the entry is a person and the rules of personal name form apply. If, as in the case of hearings, the person is expressing the official views of his organization or agency, the agency may be an added entry. For conference proceedings, the subdocument may concern a committee report which would appear as "National Governors Conference. Federal-State Relations

Committee" to make it a meaningful main entry and not just "Federal-State Relations Committee." The committee chairman may be an added entry.

Titles

Affects the following segment of the worksheet:

21-22 23 80

11	Building the American City

(The "11" preprinted in the document worksheet in columns 21-22 is the "tag" most frequently used in entering title information in the bibliographic record. When other types of title are to be entered in the section, document analysts correct these two digits to make them identify the particular kind of title.)

The title of a work is the second most important information element in a bibliographic record, theoretically being outranked only by the main entry. These two elements plus the imprint segment identify the uniqueness of the work being referenced. They constitute the "essential" document record in contrast to the "full" record, which contains added entries and other information segments relative to the work.

Every record entering the URBANDOC system contains some kind of title element. With the exception of serial publication titles which are used as a main entry in their annual record, the title element is categorized by the use of six tags:

Distinctive title	11	Building the American City
Distinctive series title	13	Municipal Information Technology Program. Series 3
Nondistinctive title	15	Annual Report
French title	16	Renovation urbaine
German title	17	Stadterneuerung
Spanish title	18	La Parguera, Plan Provisional de Desarrollo

Distinctive Titles, Individual and Series

Most titles fall in the tag 11 category. Authors of the work may concoct an unusual title for their publication, but as long as it is either distinctive or meaningful it belongs in this category. The 11 title is also presumably unique for each document, but it is the responsibility of the author, not the document analyst, to guarantee the uniqueness.

There are also distinctive series titles, one being used to tie together a whole group of publications. This information can be entered as a separate element with the tag 13. Such an entry would be in addition to, not instead of, the individual title. The use of a series title segment should be examined carefully to determine whether the additional cost is justifiable. Many series titles lose meaning when they are separated from the rest of the bibliographic information, and might better be included in other segments if that is preferable to complete elimination. If an individual report is part of a Comprehensive

Plan series, that title and the report number both fit handily in the imprint segment.

Series title information often fits also in with the main corporate entry. The advantage of this solution is that all the documents are grouped together because the main entry determines the document number. An example of this type of main entry with distinctive series title included is: Council of Planning Librarians. Exchange Bibliography.

The decision on whether or not to use a series title in tag 13 should not be confused with the decision regarding the division of whole works into subdocuments. In the latter case, the smaller unit must have an entire record of its own, including a unique document number whose formation has been described previously. The relationship to the larger work is shown in the imprint, which is segment 21, to be discussed below. There are undoubtedly marginal cases in which a multi-volume work could be treated either as a series, with individual volumes tied together by the series title, or as a single multi-volume whole document, divided into one-volume subdocuments. Such cases must be decided by balancing the effects of both kinds of decisions on the products of the system. This is the kind of situation in which experience must prevail over written instructions.

Both individual and series titles of a distinctive nature can be used to produce the URBANDOC title indexes, which are straight alphabetical listings. The 11 entries alone or in combination with the 13's would also constitute the input to a KWIC-type program in the event that it became necessary to include a key-word-in-context or key-word-out-of-context index among the subproducts of the system.

Forms of Entry

Distinctive titles are ordinarily entered as they appear on the title page or table of contents with the following modifications: (1) elimination of the initial article, in order to bring out significant words early in the entry; (2) conversion of all punctuation into periods and commas, which are present in the character sets of all input and output devices; (3) writing all ordinal numbers, and all cardinal numbers of one hundred and below, in alphabetic characters.

In entering the distinctive title of an article in a periodical publication, modification of the title is occasionally required because the publication's editorial formats may be geared more to attractive presentation than bibliographical analysis. Such occasions arise when there are variations between the title as it appears in the table of contents and as it appears at the head of the article itself. The document analyst must choose which is more appropriate. If the article lacks suitable heading title altogether, the analysts must improvise from the information presented at hand.

Despite the rule that titles are not ordinarily punctuated at the end, the presence of a period after the last word is not catastrophic. An exception occurs when a period and space are used to separate main and subtitles. Although this separation method is presently used in the URBANDOC system for purposes of style, it may serve in the future as the basis for a computer program to suppress the printing of subtitles that follow the period in certain publication listings. To make this potential program feasible, analysts are cautioned against other uses of the period and space in title entries.

Since URBANDOC presently is limited to single type case in its computer printer equipment, there are no capitalization rules to distinguish upper and lower case usages.

Nondistinctive Titles

Report literature issued in all areas of public administration contains many nondistinctive titles which are tagged 15. These are mostly "annual reports" although there may also be "papers," "proceedings," and "conferences."

The category test is whether the title, with or without the addition of a place or date, has stand-alone value and is thus an 11 or must be read in conjunction with the main entry in which instance it is a 15. "Conference on Scenic Easements in Action, 1966," is clearly an 11 category title, while "Annual Conference, Hastings, Eng., 1966," is a 15-type title.

The main reason for distinguishing between distinctive and nondistinctive titles in the URBANDOC system is to eliminate from any indexes those title entries which have little information to contribute to such a listing. In doubtful cases, it is safer to tag a title as distinctive (11). In all events, the information is in the bibliographic record and can be recovered by making a special listing of tag 15 entries for rare cases when no other technique will access it for users.

Title Augmentation

Most nondistinctive titles could be converted to the meaningful tag 11 category by addition of other information about the document. An "annual report," commonest URBANDOC example of the 15 title, needs only the name of its issuing agency to change character. However, it is debatable whether much is accomplished by the extra keypunching entailed in such modification. The agency name is already available in the corporate author main entry, and the main entry plus short title appear in essential bibliographic unit listings that are prepared for browsing purposes.

Whether "conference" titles should be augmented by the addition of date and place of meeting is also debatable. The number of the conference is not essential information unless it is an important anniversary. Place and year are more frequently included as part of the imprint. Obviously, it would be redundant to repeat in a 15 title any information that appears in another part of the record. No rule will cover all situations and discretion is called for on the part of the document analysts.

Another type of augmentation – the addition of subject terms to the title – is not practiced at all by URBANDOC. If the author has not sufficiently indicated the content in his own title, the reader picks up further clues from the subject heading segment of the record in the printed index and from descriptors in the retrieval report. If there are few of the latter in a particular record, it is because: (a) there is little reason to retrieve that record, or (b) it is a "proceeding" type of document with subdocument records which contain more significant detailed analysis.

In summary, and in general principle, the URBANDOC policy was to limit the amount of effort that might be spent on trying to enhance the value of the titles of its documents.

Since the project was so retrieval-oriented, it seemed wiser to devote greater attention to the content analysis which is discussed in such detail in following sections of the manual. The document analysts did not tamper with titles beyond the minimums already indicated. However, another documentation facility using the URBANDOC approach to descriptive analysis in general could decide to do more with titles without destroying the essential integrity of the system.

Non-English Titles

Although URBANDOC is presently concerned only with materials that are published originally or simultaneously in English, this definition of language responsibility still provides the system with many materials that are published in a multi-lingual arrangement. The main contributors are Puerto Rico, the United Nations, the International Federation for Housing and Planning, and some Canadian sources. In the latter case, one publication may contain both English and French articles, but each in only one language.

The present title segment of the record is one which can accomodate non-English bibliographic elements. Thus early in 1969, tags 16, 17, and 18 were designated for entry of French, German, and Spanish titles respectively. It is now possible, as new materials are added to the system, to produce title indexes in each of these languages. The URBANDOC staff does not attempt original translations or corrections; foreign titles are entered as they appear in the documents. The rest of the documentation for these materials is still in English. (The "English" throughout the system is, however, a mixture of the British and American versions, as word spelling in titles may clearly indicate.)

The French, German, and Spanish words are entered without any accommodation for accents. Obviously, any extension of the system beyond languages which can be handled easily will require further thought.

Imprints

Affects segment 21 of the document worksheet:

21-22	23	80
21	1969. 15p. 7 pages of maps	

Usual Contents

The imprint statement in a bibliographic record concerns the name of the publisher, place of publication, and date. This is the one place where URBANDOC presently follows conventional library practices of grouping the elements in one segment instead of the newer tendency of separating them. However, as pointed out earlier, URBANDOC does not repeat the name of the publisher when it is identical with the main corporate entry, nor the place if it also appears in the main entry. The reasons are economic: the shorter the record, the lower the costs to create, maintain, and print that record.

Whether or not name and place of publication appear in the imprint segment, date is always specified. It ordinarily agrees with the date portion of the document number. Exceptions are annual reports that appear the year following the period of coverage, or proceedings that come out after the conference.

In addition, URBANDOC uses segment 21 to indicate the physical size of the document in terms of number of pages. This is traditionally called "collation information," and would include descriptive notes to attachments (appendices, maps) or unusual page sizes.

Optional Contents

URBANDOC procedures permit further use of segment 21 to include other terms of useful information at a low additional cost. Some of these pertain to numerical order in a series:

Tech. Rept. No. 5
1 in series of 6

If the record cites a larger work that is to be broken into subdocuments, this can be indicated: "Each paper analyzed as a subdocument." If the record cites a subdocument, then the same segment ties it back to the larger work: "In, BASPONP68N. p. 1-12."

Presently, the physical medium of the document is not indicated. If the medium is magnetic tape, Microfiche, or microfilm, this information would also be entered in segment 21.

Imprints: By Series

Nongovernmental Publications (National)

In the A, B, and C series of documents, the precise use of segment 21 is variable, but logical. Publisher's name and place of publication are used when necessary, and in conjunction with the main entry. The most common library situation arises with a personal main entry and a well-known trade publisher or university press. This is handled as follows:

01 Keyes, Langley Carlton, Jr.
21 MIT Press, 1969. 364p.

A personal main entry and a less-known publisher requires the place of publication:

01 Moffit, Francis H.
21 Scranton, Pa., International Text Book, 1969. 540p.

When a well-known corporate main entry is also the publisher, the two segments read:

02 Ford Foundation
21 New York, 1969. 38p.

In the C series, if the academic institution or one of its divisions (or institutes) is the corporate author main entry, the place may or may not be entered in the imprint and collation. The decision is based on whether the corporate author main entry includes the place:

02 North Carolina. Univ. Center for Urban and Regional Studies
21 Chapel Hill, 1969. 181p.

02 California. Univ. Berkeley. Center for Real Estate and Urban Economic Studies
21 1969. 447p.

Federal Agencies

In the D and E series (federal executive and legislative documents) place of publication is assumed to be Washington in the absence of evidence to the contrary. It is not entered in the URBANDOC record.

Whether or not "GPO" (the accepted abbreviation for Government Printing Office) is added depends on whether it appears on the document. If it is absent, the user can assume that the document is issued directly by the agency that is listed as the main corporate entry.

Subnational Agencies

State

In the case of state publications (G and H series) it is also assumed, that place of publication is the capital city in the absence of evidence to the contrary. The place is therefore not given in segment 21 unless it is a regional office:

02 California. State Planning Office
21 Los Angeles, 1969. 36p.

Municipal

Since municipal publications (K series documents) always incorporate place name in the main entry, it is never repeated in the imprint.

County

County documents (L series) should always include city of publication, since county seats are not generally well known. State name does not appear, as it is already in the main entry:

02 Marion Co., Ind. Metropolitan Planning Dept.
21 Indianapolis, 1969. 31 p.

Metropolitan and Regional

In the O series, the place of publication goes into the imprint segment if it is not part of the main corporate entry:

02 Central Connecticut Regional Planning Council 21
21 Plainville, 1969. 26p.

Civic and Miscellaneous Private Groups (Local)

Again, place of publication is included in the imprint if it is not clearly indicated in the corporate main entry.

Acquisitions and Publications Lists

The 21 segment for the O series should also include place of publication.

Non-U.S. Materials

International Agencies

Place of publication varies for materials issued by United Nations agencies and its affiliated organizations; therefore in the R series the place name should be entered in the imprint whenever the main office of the agency is not in New York or Geneva.

Non-U.S. National and Sub-National Agencies

In general, the form and procedures for entering the place in the imprint statement for materials issued by non-U.S. agencies follow the rules established for their counterparts in the U.S., see above.

Periodicals

Articles in and issues of periodicals recorded in the URBANDOC system (Y series) make use of a new bibliographic tool as part of their imprint statement. The title of the publication is entered as the CODEN established for it by the American Society for Testing and Materials. This six-character alphabetic CODEN is entered as the first element followed by the volume number, inclusive pagination of the article and the month and year of the issue. Volume number and subsequent elements are entered in numeric form, e.g.:

JOHO-A. 26-65-69. Mar. 69.
("JOHO-A" is the Coden for *Journal of Housing;* "26" is the volume number; "65-69" are the pages.)

While use of the CODEN shortens the length of the basic imprint and collation statement, it is important to remember that the CODENs must be explained to most users of bibliographic records containing them. In the *Input Index*, for example, a schedule of CODENs which apply to the particular index is given with the full title of each periodical.

Expansion of the numeric elements in the imprint statement to include the number of the periodical issue, day of publication if the periodical is a daily, etc., may be made. The number of the issue is not specified in URBANDOC entry rules.

An adaptation of the periodical imprint statement form of entry has also been used by URBANDOC for articles appearing in newsletter or bulletin-type publications. Two examples of such serial imprint statements are: "DOWNRB. 15-14. Feb. 1-69" and "ASPONL. 34-1-2. Jan. 69". In these instances, "DOWNRB" and "ASPONL" are the same as the document number root established for the serial and stand for *Downtown Renewal Bulletin* and *American Society of Planning Officials News Letter* respectively. They also must be listed in the explanatory schedule.

Subdocuments: Imprint Expansion

The imprint statement used in subdocument does not have stand-alone value, thus causing identification problems when a subdocument appears in a *Retrieval Report* apart from the main document in which it is contained. URBANDOC considered the possibility of repeating author and title of the main work in the imprint statement of every section that is analyzed separately. However, that would lengthen the certain listings in the *Input Index* unnecessarily.

The solution was to create a separate segment, tagged 22, for expanding the imprint where necessary. This segment would appear in a *Retrieval Report* but be suppressed from the *Input Index*. The information in that segment is a repetition of the author, title, and imprint of the main document. However, the expansion of the record is performed by the computer, not by the document analyst. The only manual procedure is to be sure that subdocuments are entered in one processing cycle with their principal documents.

Abstracts and Annotations of Content

Affects the following segment of the worksheet:

21–22	23	26	80
23	Report sets forth a 10 year program for housing, renewal,		
	education, and recreation and reflects an important aspect of		
	the citys comprehensive planning.		

Form

If there is an abstract or other annotation of content to be entered into the record, that segment is tagged 23. It is the one segment on the entire worksheet which does not require uniformity in the style of the entry as it is not used for the production of a separate index, and the only one in which the first line of the entry is indented, beginning in column 26. The only theoretical restriction is the size of the entry. If a segment is more than 943 characters in length, it will exceed the upper limitations of some of the URBANDOC programs. In practice, an abstract rarely exceeds 700 characters, and 560 (10 lines of 56 characters) is considered the maximum desirable length. Beyond that, the data management and processing costs seem to exceed the benefits.

Abstracts

Abstracts are not presently originated by the URBANDOC staff. Those that accompany the documents, either as part of the publication or in some attachment, are considered for entry if they are not subject to copyright restrictions. Most of the abstracts presently being entered into the system are those that come with Urban Planning Assistance Program reports. (See Chapter IV.) Their inclusion, in some form, is considered mandatory.

Some of the professional publications, particularly the periodicals, also include abstracts. If they are to be used, the necessary arrangements must be made with the copyright holders.

Some of the abstracts that are prepared by the issuing agencies or their consultants are not completely suitable for direct entry into an expensive information system. When they are long, repetitious, and not necessarily representative of the contents, the document analysts have the responsibility of making the appropriate editorial revisions, a procedure which has turned out to be less costly than the entry of unedited abstracts.

Annotations of Content

Segment 23 is also used for essential annotations and cataloguers' notes that cannot be accommodated elsewhere in the record. These are phrases or sentences which seem necessary to complete the documentation, whether as to the descriptive analysis or the content. The annotation may alert the user to appendices with special features (particularly if they are not entered as subdocuments) or identify the authors (as children who participated in a Head Start program). Although the system's capability for annotation is tempting, it should be resisted wherever possible.

Hyphenization

Since URBANDOC does not use computer hyphenization and computer justification of printed output, it has not been necessary to develop rules on the use of hyphen for entries other than those included in the index sections of the *Input Index*. Abstracts, annotations of content, and any other entries in segment 23 can therefore be made without regard to conventions for ending lines of input. For those individuals who will be concerned with this issue, URBANDOC recommends that they develop their own sets of procedures. Additional procedures in this regard will not affect the successful operation of the URBANDOC system.

Project Numbers

Affects the following segment on the document worksheet:

21–22	23	80
25	Calif. P-276	

When project numbers are entered in a separate segment of the bibliographic record, and that segment is tagged appropriately, it is possible to produce a special Project Number Index to the total file. Since this type of bibliographic access is well known in the hard sciences, it seemed worthwhile to illustrate the method in the URBANDOC system. However, for reasons of economy and convenience, the illustration is limited to one type of project number, the particular choice being guided by the fact that they were easily available, and that they related to projects that were financially aided by the U.S. Department of Housing and Urban Development. The Urban Planning Assistance Program, mentioned in the *Demonstration Report* (see also Chapter IV), provided the reports and the project numbers for this part of the URBANDOC demonstration, and segment 25 was dedicated to incorporating the project number information in the bibliographic records that were affected.

Ordinarily the project number appears on the outside or inside cover of such reports. The number, and therefore the form of the entry, is very short: the abbreviation for the state followed by "P" for planning and then Arabic numbers indicating where that project belongs in the "P" grants for that state: "FLA. P52." Occasionally only the state name is mentioned, in which case the state abbreviation is entered alone in segment 25. (The latter entries will automatically sort ahead of those with the full project numbers.)

The present Project Number Index (illustrated in the *Input Index*) furnished instant access to all Urban Planning Assistance Program reports. As a class, these documents have a sufficient number of special characteristics to merit some kind of specialized treatment. They can all be retrieved, as will be indicated later, through the descriptor "UPAP REPORT," but segment 25 is the only place where the individual project numbers also appear.

Other segments of the bibliographic record which have been reserved for future development could be used for entering and listing project numbers of other HUD programs. If, for eample, segment 28 were dedicated to demonstration program reports, then all the records for URBANDOC publications would include "N.Y. D-9" in that part of the record. The only problem with this approach is that if it were extended to the full gamut of HUD programs, it would exhaust the number of record segments that could be reserved for this use. It might therefore be better to group HUD project number entries in a small number of segments by program type.

Whatever the details of handling project numbers in the system, the idea has several ramifications. In the first place, identifying a report with a program provides an administrative context for the initiated user. In the second place, it adds report management capability to the system. A Project Number Index can be used as a checklist for monitoring the issuance of reports.

Citations

Affects following segments of the document worksheet:

21–22	23	80
31	Illinois, County Zoning Enabling Act of 1965	
36	Rand Corp., Impact of urban renewal on land use, 1964	

(Optional segment 31 is reserved for statutory citation and segment 36 for literature citations.)

The URBANDOC bibliographic record presently provides for two kinds of citation capability: statute and literature. Neither of these is the kind of citation being used in the hard sciences, where theoretically they indicate linkage between the works citing them. URBANDOC uses the citation strategy to provide access to specific kinds of proper name information that cannot be readily handled by any other means. In terms of bibliographic function, the URBANDOC citations are close to subject headings. In this respect they resemble the added entries which are made for people or corporate bodies that receive prominent mention in a document.

Legal Citations

References to laws are recorded in the legal citation, segment 31. Use of the tag is limited to references that appear particularly helpful. These include major discussions of laws that are especially relevant to planners, or for discussions of lesser-known laws that are more difficult to find in literature searches. Within these constraints, any level of statute origin may be cited, national or subnational, U.S. or non-U.S.

Form of Entry

The standard popular name, which is established in the act itself, is the form of entry. The popular name is the one most likely to be used by the author, and it is not difficult to find or establish in its authoritative form. The popular name is usually sufficiently descriptive of the act's content to be suitable for listing in a citation index. Cross references by sponsors, public law number, or standard statutory and code citations are left to other legal literature resources. URBANDOC does not attempt to duplicate the extensive reference services provided by and for the legal profession.

Additions to the name of the act to indicate origin are made as uniformly as possible since the 31 tag entries are used to produce a listing in a printed index.

For federal legislation "U.S." is added at the end: "Housing and Development Act of 1968. U.S." If the document discussion is concerned with a particular section of the act, that information is added as the last element:

> Housing Act of 1954. U.S. Sec. 701. Amended, 1961

State laws have the state name added at the beginning of the entry:

> Illinois. County Zoning Enabling Act of 1965

Local U.S. legislation at municipal or county levels follow the form of entry used for states with state designation abbreviation added if required:

> Chicago. Zoning Ordinance of 1957
> Fairfax Co., Va. Zoning Ordinance of 1961. Amend.47

For non-U.S. legislation, origin is indicated at the beginning of the entry in all instances:

U.K. London Government Act of 1963
Canada. Central Mortgage and Housing Corporation Act of 1954

On rare occasions, tag 31 is also used to cite a legal decision, although it would be more satisfactory to reserve a separate segment for case law citations should this information area expand. When used for decisions, the form of entry conforms to accepted legal usage:

Bush Terminal Co. v. City of New York, et al.

Literature Citations

Literature citation entries are made in tag 36 when the text of a document dicusses in depth a particular book, report, journal article, etc., and where reference to it would prove helpful to the user. There is no attempt to make the entry authoritative nor to edit the reference as made by the author including finding elements of information that he omitted. To do any of the latter would entail as much work for cited materials as for the documents themselves and such expense is unwarrented in light of other documentation priorities.

Form of Entry

The citation is stated as compactly as possible, giving the main corporate or personal author, title, and imprint and collation. URBANDOC general descriptive analysi rules are followed. The work may or may not be a document in the URBANDOC systen. If it is, the URBANDOC document number can also be included:

Tri-State Transportation Commission. Who rides taxis. 1969.

Census Bureau. Census User Dictionary. GPO, 1968. 51 p. URBANDOC No. DCENS . . 68CU

The literature citation segment is not used to cite the work discussed in a book review, although it could be. URBANDOC experimented with a more elaborate stategy for entering book reviews so that the review citation would attach itself to the main document record for materials in its system, but dearth of user interestfor such information halted further development.

Acquisitions Information

Whether or not a bibliographic information system should include information n how to acquire the documents depends on the use of the system. If it is intendedsolely to document materials already collected, then there is little need to encumber th indexes and *Retrieval Reports* with local addresses and prices. If, however, the recipien of these products expect to use them as book selection tools, then they will want all ormation necessary to complete their orders.

URBANDOC has resisted these entries because they increased the input costs without demonstrating new intellectual accomplishments in the way of documentation. However, the requests for such information have been so numerous that they were included in the prototype issue of the *Input Index* prepared as part of the final report. Segment 56 was designated for the entry.

The easiest method of ensuring that acquisition information appears is to insert it into the bibliographic record for each document. The publishing body is already in the record, either as the main corporate entry in the 02 segment or as the publisher in the 21 imprint segment. If the document is available from one of these, it is necessary only to add local address and price. If it is available from a clearinghouse, then that information has to be entered, with an order number if possible.

The question is *where* the acquisitions information should be added. If in the 21 segment, then that segment will be longer, but the effect on the length of the entire record will be minor. If a separate segment is used, then the over-all length will be considerably more. The main advantage of the latter is that as a separate segment there is always the option to suppress it in a particular printing if a display of acquisition information is not desirable.

An alternative strategy, not presently in the URBANDOC system, would call for separate listing, to be included in every *Retrieval Report* and every publication issue, that would give sources and their addresses. The problem is that such a "standard" listing would include a great deal of information not relevant to a particular retrieval report or publication issue. In contrast, an "individualized" listing would call for more manual or machine procedures. However, these possibilities should not be discounted for future implementation.

Geographic Index Names

The entry of geographic names is most closely related to the content analysis of the documents, but appears here because an additional entry is made, segment 97 of the record, as an element of the descriptive analysis. Geographic descriptors, when part of the content analysis, are processed in the URBANDOC system as numeric codes. Such codes are unsuitable for use in a published index. Alphabetic place names, despite various defects, lead to the easy production of geographic indexes, and they are accommodated in segment 96.

The geographic data entered in this part of the record is minimal. The entry is first by the abbreviated name of the state, then by city if appropriate: "Colo., Denver." (Alaska, Idaho, Iowa, Ohio, and Hawaii are not abbreviated.) All city names are preceded by the state, regardless of how they are handled in other elements of the descriptive analysis. Wherever possible, the names of central cities are also used for discussions of metropolitan areas. Other entries are made as consistently as possible, and with due regard to their later sequential arrangement in an alphabetic listing.

Since the geographic section of the URBANDOC Thesaurus was developed before the Geographic Name Index, the current entries in this index are not computer validated.

With the continuance of URBANDOC or any other related effort, the computer system would be modified so that the entries in the Geographic Name Index would be expanded and validated in a manner similar to the Subject Heading Index.

Foreign capitals currently are entered without national specification. In the event that capitals of emerging or remote nations are entered into segment 97 in the future, provision can be made for citation of the nation in this segment.

DOCUMENT ANALYSIS: CONTENT

General Considerations

The core of the URBANDOC system is the content analysis of the documents. Without it, there can be neither retrieval nor subject listing in the *Input Index*. The primacy of content analysis is not unique to URBANDOC, but in many other systems the indexing pertains to the abstract rather than to the original document. With abstracts, there is less room for discretion in the indexing process.

URBANDOC faced the task of content analysis well aware that the social sciences present a challenge to any documentation effort. The project has not only constructed a workable indexing terminology but has also devised specific indexing strategies. Although in many ways content analysis is necessarily less rigid than the descriptive analysis, it is nonetheless governed by firm policies.

Some of the policies described in the following pages were determined by the nature of the literature, and are independent of any particular indexing vocabulary. Other strategies relate specifically to the URBANDOC Thesaurus, the structure of which is explained below. There are really two thesauri: subject and geographic. The subject section specializes in planning, renewal and housing terms. It is sufficiently broad in scope to identify all the pertinent concepts, and yet specific when it comes to detailing such programmatic devices as "turnkey." The geographic thesaurus makes it possible to extend place identification to specific areas where the concepts have been expounded or the devices tested.

Analytic Terminology

Subject headings are assigned to each document in order to create the subject section of the *Input Index*. The headings are drawn from the *descriptors* (terms in the Subject Thesaurus) assigned to the document as a result of indexing, and are given special coding that permits their manipulation in the publications programs. The subject headings consist of from one to three descriptors, central to the document, and must be terms which can express the content without aid of modifiers or related descriptors.

The relationship of the subject headings and descriptors is also discussed in the sections of this manual on the Pre-edit Module and the File Maintenance Module and in the sections in the *Operations Manual* on the Pre-edit Module and Document Data Entry. In general, the subject heading is selected from the total set of descriptors assigned to a document. The systems limitations on the number of assigned descriptors is 99. However, the decision to limit the selection of the descriptors to be used as subject headings to three is one of URBANDOC policy. The system limits the number of subject headings that may be computer-generated to ten.

Frequently headings are of more generic nature, always keeping in mind other documents of similar content. On the other hand, extremely broad terms such as HOUSING, TRANSPORTATION, and URBAN AFFAIRS are not used unless the document is very general in content and/or is quite brief. Descriptors reflecting new federal programs or

concepts of unique subject matter are also considered for assignment as subject headings to facilitate manual searching in the *Input Index.*

A single problem area may be under study by an agency for several years. Individual reports that are issued may cover only one aspect of the problem, but the entire series will be tied together by a common subject heading, e.g., LAND USE STUDY or TRANSPORTATION STUDY.

Descriptors, both subject and geographic, have a dual role. First, they are the basic data in performing a machine search, and second, the group display of descriptors can function as a substitute abstract.

Subject descriptors may indicate content directly or they may furnish information about the development of the content in the document at hand. OPEN SPACE PLANS, REHABILITATION, and HOUSING PROGRAMS exemplify the first. ANALYTIC TECHNIQUE, INDICATORS, and STANDARDS INFORMATION are descriptors that enrich the content analysis when used with the more direct terms. They are also valid points of access to the data base in their own right.

Geographic descriptors identify the document as to place. The absence of geographic descriptors often indicates that the work is of a theoretical nature. The indication of geographic locale consideration can be either comparative or specific; URBANDOC has established conventions for both types of analysis. Comparative analysis is indicated as the following descriptors: B/ for comparisons among cities; C/ for countries; D/ for states. Specific cities, counties, and states are entered in standardized natural language, and converted by the computer to numeric codes. (See the geographic thesaurus discussion.)

Subdescriptors are terms in the subject thesaurus which modify the descriptors. They can be used to establish greater precision, frequently in the adjectival sense:

INDUSTRIAL PARKS/IN-CITY	(The terms to the
OPEN SPACE PLANS/REGIONAL	right of the / are
IMPACT/PSYCHOLOGICAL	the subdescriptors.)
RENEWAL AREAS/INDUSTRIAL	

However, the analysts must be careful to avoid combining descriptors and subdescriptors to express concepts for which there is a specific descriptor. Subdescriptors are most useful for expressing the contents of documents; they are less useful in retrieval (see Chapter V) and have no value in subject headings, as the computer suppresses them in printing subject indexes.

Format terms are such descriptors as PERIODIC REPORTS, DIRECTORIES, HEARINGS, LEGAL TEXTS. They can be used in search both affirmatively and negatively: it may be useful to be able to link DIRECTORIES and NEIGHBORHOOD SERVICE CENTERS if the need is specifically for directory-type information. It is equally useful to be able to eliminate PERIODIC REPORTS from many types of subject searches (see Chapter V, on search strategy).

Date analysis: The date of document publication, the date the document was entered into

the system and the time series covered in the document (either historical series and/or projections) are all entered as elements in the content analysis, and become part of the total document record. The Document Master File and the *Retrieval Report* thus provide both URBANDOC and its clients with comprehensive "time" information.

Document Examination

Since all of the indexing terminology is assigned by the document analysts, they must use every possible means to analyze the materials accurately and to their fullest potential. Some of the guides are traditional in book cataloguing, others have been modified or added by URBANDOC. Those furnished by the documents themselves are the author, title, subtitle, preface, table of contents, introduction, conclusions, indexes, and appendices.

Author: If a document is the work of a personal author, the analyst is often able to establish the orientation of the document from his reputation, profession, institutional affiliation, and previous writings. In corporate authorship, the type of issuing agency also provides some degree of subject orientation. This kind of guidance depends on the document analysts' being familiar with the various personal and corporate authors active in urban affairs, a reasonable requirement in a specialized information center.

Title: Titles of reports are usually, but not always, an accurate reflection of contents. This is less true in the monographic and some of the periodic literature, but in any case they must never be ignored. The most serious problem lies in titles using words that are in the Thesaurus, but not in the standard usage. The classic example is Peter Blake's *God's Own Junkyard,* which is basically not about junkyards, but about urban sprawl. In this case, a decision to assign the descriptor JUNKYARDS is defensible, but only as an additional term after all the correct ones have been assigned. Frequently misleading or vague titles are amended by their subtitles, so they too should be examined carefully.

Author and title may have to be considered together before the true content of the document is established. The International Conference of Social Work published its proceedings under the title, *Urban Development: Its Implications for Social Welfare.* In this case the author is more accurate as a guide than the title, since the papers really deal with social work and its services rather than urban development.

Table of contents: Although the quality may vary tremendously, the table is a traditional guide to subject analysis. Section headings, chapter headings, and annotations are all helpful.

Indexes: Indexes vary even more in quality, ranging from those produced to satisfy minimum requirements to those that are carefully and professionally prepared. Internal indexes — those that are bound with the document, such as a book — are more useful than indexes which appear at the end of a periodical volume. The latter may be better, but the delay in their publication makes them useful only for revisions of the document analysis, not for the original entries.

Preface, abstract, introduction: All of these indicate the intentions of the author. The fulfillment of these intentions should, however, be verified in the main contents.

Appendices, tables, charts: These not only point up the contents, but are often worthy of analysis in their own right. They may require separate treatment as a subdocument.

Perusal of the entire document: The amount of reading or skimming depends on the document, and no hard rule can be enunciated. However, the possibility of detailed attention is always present. Nor can there be strict rules about the number of descriptors that are appropriate. Some materials are general, others are specific. The fact that a document has received detailed descriptive analysis does not necessarily mean that detailed attention to content is also appropriate.

Analytic Policies

In the assignment of descriptors to a document, the above-mentioned guides are tempered by project policies. Whereas indexers in other information systems may be instructed to go directly to the most specific terms, the first URBANDOC rule is to determine the broad subject category that is involved. If, for example, site acquisition is the specific concern of the document, the analyst must determine whether it is for housing or for recreational facilities. It is basically a problem of the forest and the trees, and proper identification of the forest is the first essential.

The second rule is to determine the relationship of the document at hand to others in the system. Frequently the decision between one descriptor and another is close, and may have to be determined by precedent. This is particularly true where a new document is part of a series on the same subject and the earlier numbers have already been analyzed and entered.

The third rule is the opposite side of the coin: to determine the distinctive contribution of the document at hand in contrast to all the others in the system. If there is a long series on comprehensive planning, ordinarily each individual report will take up one specific problem, such as community facilities. Or there may be a series of neighborhood studies identical in table of contents except for the name of the neighborhood. Such geographic variations between documents are more obvious than those caused by variations in methodology as practised from agency to agency. However, the methodology may result in documents that are truly of unique interest, and the analysts must be alert to the possibility that a publication which appears to be of standard interest is really outstanding. There is a descriptor UNIQUE INTEREST which can be added to indicate innovative methodology, implementation, or presentation.

A fourth URBANDOC policy involves relating the document at hand to current issues wherever possible. There may be situations in which a particular subject receives such passing attention that it would not be assigned a descriptor except for the fact that it is extremely relevant. This means that the analyst must keep aware of the issues through the media of the daily press, HUD releases, conference programs, and the professional newsletters. On the other hand, the issue may be so transitory as to not survive the processing cycle in which the analysis is taking place.

The fifth policy involves a decision toward inclusiveness when in doubt. Although users want precision, it is better to retrieve more than too little. Human editing can cut the

output of the system, but it cannot compensate for errors of omission in creating the input. The permissive attitude toward inclusiveness is not a license for assigning every descriptor imaginable to a document, only a guide for marginal cases and for seldom used descriptors that indicate important concepts.

Related to the policy of inclusiveness, but one with a different theoretical basis, is the policy of multi-level indexing. It involves such decisions as assigning the broad term RECREATIONAL FACILITIES to documents concerned with POOLS. In traditional cataloguing, three specific terms can be assigned to a document, but if there are more, a broader heading is substituted. The URBANDOC system does not have such limitations; many individual subject concerns can be indicated if there is sufficient information on each to warrant it. The more such individual subjects, the more apparent reason for an inclusive descriptor as well, because such a work could well be useful for general discussions on RECREATIONAL FACILITIES. However, this is not a matter of rule but of judgment.

The multi-level policy should, in most cases, apply only to two levels. Documents discussing the OPEN SPACE RATIO in ZONING ORDINANCES may incorporate both those levels of indexing, but would not also carry the still more generic term LAND USE CONTROLS. Even though the broader descriptors are reserved for broader discussions, the narrower concepts can always be retrieved by employing the appropriate search strategies.

Characteristics of Complete Documents

Books and Other Monographic Types of Reports

In analyzing a book the indexer tries to establish the key concept of the work and to express them in the appropriate descriptors. The section above, "Document Examination" is especially helpful for all full-length reports where there are a great many clues in the document itself as to its proper analysis: chapter headings, indexes, etc. One of the chief problems in such material is striking a proper balance between the kind of internal index which is often provided for the book itself and the kind of analysis that is appropriate for a single record in a bibliographic reference system. The index, if it exists, may be as irrelevant as the title used as an example or it may be helpful to the point of suggesting revisions to the Thesaurus.

Generally books are indexed as a whole. Particular chapters within a book may warrant special analysis. In such cases the over-all indexing covers all portions of the book that are not treated separately. On the other hand, if the book is a series of readings or papers emanating from a conference, it is best to index each part or grouping of parts as subdocuments. In this kind of situation, there will be one set of descriptors assigned to the over-all work, or principal document, and another set assigned to each of the subdocuments. The analysts must be careful to avoid analyzing the principal document in ways that are appropriate only to its parts, lest the whole point of subdivision be lost.

Since complete books tend to cover a fairly large portion of knowledge, the analyst can expect to assign some generalized descriptors, such as URBAN ECONOMICS. Hopefully,

the author would also be specific about some subdivision of his topic, thereby calling for some specific descriptors as well. Since it will probably be impossible for the analyst to cover every specific in the book, judgment must be exercised in choosing those specific descriptors that will provide the most useful access points. A term like REUSE should not be used unless there is a real contribution to the subject, not just a passing mention in connection with LAND VALUES.

Periodical Articles

Articles vary in the treatment of their topics from the very general to the very specific. Frequently the article was originally given as a speech – either the keynote or the after-dinner speech at a conference – in which case the nature of the occasion may give some clue as to possibilities for narrowing what seems to be a generalization into a meaningful specific. A message on housing to an audience of mortgage bankers is likely to get down to MORTGAGES and INTEREST RATES, the latter descriptor being most relevant today if the article contributes sufficiently to the subject.

An article in *Architectural Forum* entitled "Fluted Concrete in the Florida Sun" gave as its subtitle "Miami Public Housing Complex for the Elderly Represents a Big Forward Step in Architecture and Planning." This exemplifies the specific.

The subtitle suggests that the article deals with public housing, the elderly, and architecture. Planning in this context is not to be construed as urban planning. Scanning the text reveals the article is concerned with the design for a public housing project for the elderly in an area of Miami where there was opposition to the project. Most of the text is devoted to the project design in words, photographs, and floor plans. Attention is given to the excellent site plan, which mitigated neighborhood protest. There is also some discussion of innovation in design relevant to Public Housing Administration (PHA) guidelines. In isolating terms to be considered as descriptors, we have (in natural language): public housing, elderly, location, site planning, architecture, PHA, guidelines, and Miami, Florida. The indexer then has the problem of translating these terms to URBANDOC usage through the vehicle of the Thesaurus.

The Thesaurus verifies PUBLIC HOUSING, SITE PLANNING, and PHA as legitimate terms. ELDERLY is used as a special group, and HOUSING THE ELDERLY is a distinct housing term which is preferable usage for this article. Since the text speaks of guidelines and conventions of the PHA rather than standards, the indexer must use the term REQUIREMENTS in preference to STANDARDS. DESIGN and LOCATION are descriptors which can be used as secondary concepts. Therefore, the indexer uses them as modifiers for the term PUBLIC HOUSING.

In the article under discussion, PUBLIC HOUSING, HOUSING THE ELDERLY, and ARCHITECTURAL DESIGN were assigned as subject headings. Only those descriptors coded "SH" appear as subject headings in the major subject listing in the *Input Index*. They also appear without the modifiers LOCATION and DESIGN since the system does not provide for their incorporation in the subject listing. All descriptors are available for search purposes. When a document satisfies a search request, the retrieval printout lists the complete content analysis for that document.

DOCUMENT WORKSHEET – CONTENT ANALYSIS SECTION EXAMPLES

23	46
*UPAP REPORT	
✓ #ARTICLES	----(Document analyst places checkmark preceding term ARTICLES to indicate choice of format descriptor.)
#SPECIAL REPORTS	
*PERIODIC REPORTS	

21	22	23	58	
		✓ #GEO		----(Term GEO is check-marked by analyst who enters the place name and also checks appropriate coding symbols in cols. 21 & 22 for systems use.)
/	*	*-MIAMI, FLA.		
/	*	*-		

21–22	23 35	58	59 70
SH	*PUBLIC HOUSING		LOCATION
	* DESIGN		
SH	*HOUSING THE ELDERLY		
	*SITE PLANNING		
	*PHA		
	*REQUIREMENTS		
SH	*ARCHITECTURAL DESIGN		
	*		

(Note location of entering descriptors used as modifiers for systems reasons. If additional ones were entered, they would also "start" in col. 35.)

Figure 5

Sections of the worksheet used in the content analysis of the article discussed above are reproduced as Figure 5. to illustrate the indexing treatment.

Characteristics of Parts of Documents

Chapter of Books, papers from proceedings, exhibits, etc.

These parts of principal documents share the common attribute of dealing with a single concept or group of highly related concepts. Each subdocument must be assigned its own set of subject headings and format, subject and geographic descriptors as necessary. Ideally, they should not repeat the analysis of the principal document, although the repetition of some descriptors may be unavoidable. (This would be especially true of the geographic descriptors.) In the case of a textbook being divided into subdocuments, the latter may be more specific and the over-all analysis record more general.

Abbreviated Analysis

Certain forms of materials, regardless of issuing agency, usually demand but brief analysis: periodic reports, brochures, pamphlets, acquisitions and publications lists. The basic approach to such documents is to assign a few descriptors as possible, whether they be general or specific. In each case the correct format and geographic descriptors are also entered, as they may be the more crucial for retrieval.

Annual reports are indexed as PERIODIC REPORTS, often the only descriptor to be designated as a subject heading. The appropriate subject descriptor (such as RENEWAL or URBAN PLANNING) is also entered for retrieval along with geographic analysis to reflect the political jurisdiction of the agency. Despite the usual similarity of these reports, however, the analysts must be aware of the possibility of substantive contribution in some cases.

Brochures are brief, public relations works of an informative nature. Many agencies publish such brochures as a means of publicizing new programs and stimulating citizen participation. They are heavily illustrated, with relatively little text, and give the barest outlines of a program. Their greatest value for a practitioner might be to furnish him with examples of public relations material for various kinds of programs. Indexing is equally brief, the format term BROCHURES, together with such appropriate subject terms as LAND DEVELOPMENT. However, the geographic aspect of the analysis should not be neglected.

Content Analysis: By Series

Nongovernmental Publications (National)

The books and monographs in series A have already received some attention in the section on complete documents. In comparison with the materials in the other series, they should present the fewest analytical problems vis-a-vis the existing Thesaurus. Insofar as books are more likely to comment on existing programs than propose new ones, the relevant descriptors and their usage would be well established in the system by the time they are required in the A bibliographic records.

The professional publications in the B series can be expected to be very practical, although frequently they are also highly theoretical. Generally they fall into four formats: SPECIAL REPORTS, PROCEEDINGS, BIBLIOGRAPHIES, and NEWSLETTERS. The societies may also contribute periodicals to the document base, but they are treated as part of the Y series unless more appropriately considered as house organs. However, the individual articles show many of the characteristics of the B documents.

The practitioners who write for their professional societies can be expected to be more precise than most commentators on the urban scene in their use of the language. As a consequence, it is relatively easy to establish the thrust of the B documents. When governmental programs are involved, they are referred to accurately; when innovative strategies are involved, that is also clear. In the former case, the existing Thesaurus is generally sufficient; in the latter, it may be necessary to consider the addition of new terms (see section on Thesaurus Revisions, below.)

The C publications — those emanating from academic institutions — are really quite varied. Frequently they constitute case studies of areas surrounding the campus, and seem similar to the P documents. This is particularly true when there is a specialized institute within a university which enters into consulting arrangements with local governmental and nongovernmental bodies.

Documents in the C series can also be PROCEEDINGS, DISSERTATIONS, and MODELS, the last being especially important in institutions working on INFORMATION SYSTEMS. COMPUTER GRAPHICS is a descriptor frequently linked with Harvard, and REAL ESTATE with the University of California.

Federal Agencies

The D and E documents establish the federal programs that affect so much of the action in urban affairs, and they must therefore be handled with utmost care. In terms of possible key descriptors, they state FEDERAL POLICY, establish PROCEDURES and administer FEDERAL AID to the many types of subnational government. It is very important that the document analysis of the series also include specific program-linked descriptors where possible, such as HOME OWNERSHIP PROGRAMS.

This is the area of input in which it is most essential for the document analysts to keep abreast of new developments, particularly those involving the Department of Housing and Urban Development. Frequently press releases, brochures, and internal directives are not themselves appropriate for inclusion in the system, but provide a helpful framework for the analysis of those federal documents that are to be included. They also alert the analysts as to concepts that may be expected to become crucial in other parts of the document base.

The very nature of the federal executive and legislative documents should put the analysts on their guard to expect problems in regard to making an existing Thesaurus function for new programs and directives. By the same token, the D and E documents are an important source for new descriptor candidates. On the other hand, the best clues for handling D materials often come from the professional publications.

The E, or legislative, documents often are quite different. Those from legislative investigating committees provide much original data especially prepared for the hearings. Access to such data is frequently difficult to obtain. It is therefore important to examine the exhibits (statistics, research reports, etc.) as well as the speeches of each set of hearings with this in mind. Statements are indexed under the format term HEARINGS/FEDERAL; exhibits as EXHIBITS. In addition to the unique content of each exhibit or statement, note any legislation proposed or enacted that is relevant. References to crucial reports, e.g., COLEMAN REPORT or MCCONE REPORT, are entered as an 08 entry on the worksheet according to instructions in the descriptive analysis section of this manual.

Exhibits are examined for general emphasis as well as unique contribution. Occasionally a number of exhibits presented by a participant at the hearings can be grouped as a single entry if they are united by a particular concept and do not warrant individual treatment. Often exhibits will contain valuable material tracing the history of particular kinds of legislation — e.g., housing acts — or provide analysis of the administrative organization of a federal department. They also serve as important reference sources for evaluation of the impact of established legislation, as well as a source of the intent of proposed legislation, particularly where the effect of such legislation is in question.

Each volume of a set from a congressional investigation is assigned descriptors and subject headings of a generic nature. The individual speeches and exhibits are catalogued and indexed as subdocuments. (See, "Indexing Characteristics of Parts of Documents.")

Legislation — When a bill or law is received in the form of the complete text or selected portion of the text, use LEGAL TEXTS as the format term. Apply appropriate descriptors to the content of the legislation.

Geographic analysis — Identification will depend upon contents of the document at hand. If sufficient material indicates emphasis on a particular locale, the jurisdiction under discussion is entered. If a community within a city is under discussion the city is entered in the geographic section and the community name as an 09 entry, e.g., 09 Watts, Los Angeles.

Subnational Agencies

Documents in these series have a number of common characteristics. They generally have a geographic orientation and are likely to cover some or all aspects of comprehensive planning, and environmental protection. As the jurisdiction of the agency narrows, the greater the likelihood of its geographic orientation.

In 1967, URBANDOC was designated a depository for reports issued by state, county, municipalities and regional planning bodies which receive federal funds under the Urban Planning Assistance Program of HUD. These reports generally follow a predetermined format, based on requirements of the program, the agreed-upon work program and scope of services promised. Although the reports deal with a gamut of planning problems, certain general characteristics are evident and identified in the URBANDOC bibliographic records. These characteristics are format, geographic identification, HUD project number, and subject. The format designation is always UPAP REPORT, geographic identification

is always provided; and the subject analysis must reflect the subjects stated on the abstract sheet when it is provided in the document. The analyst goes beyond the abstract in indexing, but does establish the primary descriptors from it. The word "implementation" is used very loosely in most abstracts and the document must be examined carefully to verify whether specific proposals and methods of implementation have really been made.

The terms REGIONAL PLANNING, STATE PLANNING, COUNTY PLANNING and URBAN PLANNING are used with restraint in indexing the subnational documents. The reason is twofold: The document is more likely to be an example of planning than a discussion on it, and the initial character in the document identification has already established the level of governmental activity that is involved. G documents are, by definition, state reports just as O documents are regional, etc.

As will be seen later, it is possible to use all or part of the document identification number in retrieval. If URBANDOC were to abandon its method of categorizing issuing agencies, then the analyst would have greater responsibility in identifying the governmental level of planning that is represented by the document through use of such terms.

Series G: State executive agencies — This is a crucial and difficult group of documents to handle properly because the states are constantly increasing their initiative in all phases of urban development. With fifty state governments involved, it is more difficult to monitor the establishment of new concepts than it is with the federal agencies, challenging as that may seem. The analysts therefore take a more conservative approach with state materials, trying to make the existing terminology work until there are clues from the professional societies that put them in better perspective in regards to each other and to the federal programs.

A second series of problems with state documents derives from the fact that the states, as possessors of the residual legal powers, have so many diverse kinds of possible actions. LEGISLATION, for example, can be modified by either STATE or ENABLING, the distinction being important in the document analysis. The states can also act directly, as in STATE PARKS, set up an independent DEVELOPMENT CORPORATION, or funnel research funds through their COLLEGES, UNIVERSITIES. They can provide direct FINANCIAL ASSISTANCE to local communities using state funds, or they can have a role in the transmittal of FEDERAL AID. In view of so many possibilities, it is therefore difficult to provide a completely dependable data base for retrieving information on state participation in urban affairs.

One of the most dramatic advances of state government has been in the area of planning, ranging widely from ECONOMIC DEVELOPMENT to the institution of PPBS (Program Planning and Budgeting Systems). Whereas the more traditional planning of LAND USE often seem to be the goal, the reports to date tend towards inventories of resources and analyses of social and economic factors. Although the descriptor COMPREHENSIVE PLANNING may appear on the preliminary documents, the analysts are cautioned against using it prematurely. More definitive is the new state interest in planning NEW TOWNS.

Series K: Municipal documents — These may report on strictly local activities, or they may be the results of programs that receive state and/or federal aid. In the latter case

particularly, the funding agency often has reporting requirements, and these should be understood before the analysts either create the descriptors or attempt to use them correctly. The WORKABLE PROGRAM is a case in point, where URBANDOC defined the descriptor as including the standard elements in the reports. CITIZEN PARTICIPATION, for example, is only added to the content analysis where it appears to be of more than ordinary interest.

Planning documents — Any studies or proposals which provide for standards, costs, financing or novel analytical techniques are given attention. URBAN PLANNING is never used as a descriptor in such documents, nor is COMPREHENSIVE PLANNING unless a report is quite specific in its designation specifying that the document fulfills part of the agency's comprehensive planning program. In the case of ZONING ORDINANCES — a most important kind of local planning document — such innovations as INCENTIVES should be noted.

Renewal documents — In the literature of these agencies, planning units are clearly designated and referred to in indexing as RENEWAL AREAS or REHABILITATION AREAS. In some cities, such areas are designated as conservation districts but URBANDOC convention notes these districts as REHABILITATION AREAS. The literature generally follows a basic pattern of inventory and analysis of the renewal area, progress reports, brochures, and other types of public relations material directed at the residents of such areas. There is obviously greater variation in resolutions of plans and goals than in the preliminary reports and unique features are noted in the indexing.

Public housing documents — The customary types of documents from such agencies are annual reports, inventories of housing units completed, under construction and proposed, and a variety of research reports. RELOCATION, REHABILITATION, and TEMPORARY HOUSING are typical of the types of descriptors applied to the research reports. SOCIAL SERVICES, TENANTS ASSOCIATIONS, and CHILD CARE will frequently be used together with PUBLIC HOUSING to provide a basis for searching the system on matters of urgent concern.

Development documents — Such reports are relatively new and are concerned with administrative efforts to coordinate RENEWAL, REHABILITATION, HOUSING, RELOCATION, and CODE ENFORCEMENT agencies under a single roof to expedite municipal and federal programs in this area. The indexer notes the traditional as well as the innovative elements in documents from these agencies, being alert as to what kinds of activities are included.

Model Cities and Model Neighborhood Programs — The administration of these programs is varied and it is still too early to generalize on the nature of the reports. Inventories and analyses of sociological, economic and physical conditions are expected to form the basis of the early materials. As with all municipal documents, the jurisdiction of the issuing agency forms the basis of the geographic analysis. Important neighborhood and project names should be added entries in the descriptive analysis, if they are central to the document.

Series L: County documents — These documents are frequently indistinguishable in subject concern from those published by the metropolitan and regional agencies in the O

series. County "government" has traditionally had greater power to suggest than to implement measures affecting LAND USE, but the literature indicates the situation is changing. ZONING, in particular, has come in for a great deal of county attention as these agencies attempt to cope with the rise of APARTMENTS in the suburbs, particularly with their effect on such sensitive issues as the TAX BASE and SCHOOL DISTRICTS.

Series O: Metropolitan and Regional Agencies — The political as well as the subject concerns of the two types of bodies overlap considerably URBANDOC has established a convention for distinguishing between the two: METROPOLITAN AREAS and associated specific descriptors are defined as pertaining to areas roughly equivalent to the Standard Metropolitan Statistical Area. They may include a central city plus only some of its suburbs, or they may extend beyond the Bureau of the Budget boundaries of the SMSA's provided they do not include another such official area. REGIONS and associated descriptors are defined as those subnational areas which are larger than metropolitan but smaller than state, although they may transcend state boundaries. Although usually URBANDOC is concerned with regions that surround a CENTRAL CITY, there are also regional bodies with different geographic orientations.

Unfortunately, the name of the issuing agency may be of little help in determining which kind of specialized subject descriptors should be applied, a situation similar to the lack of precision in titles mentioned earlier. However, it is usually possible, from an examination of the documents themselves, to determine either the political jurisdiction or the area of geographic concern, and that part of the analysis will help in understanding the thrust of the entire document. Wherever a form of METROPOLITAN AREA GOVT is central to the document that should be noted, either in this generalized way or more in the form of SPECIAL DISTRICTS or COUNCILS OF GOVERNMENT.

The subject concerns of the O documents may be extensions of those plaguing municipal government, such as EMPLOYMENT, OPEN HOUSING, and LAW ENFORCEMENT, or they may be more directly related to the countryside, such as OPEN SPACE, URBAN FORM, and AIRPORT PLANNING. In either case the existing Thesaurus should suffice as the concerns are not new, just the geographic extent of the attempt to deal with them.

The geographic analysis is therefore important, even with regions which do not have census-based descriptors available. In the more important of the regions, natural language descriptors have been devised, and their use is discussed in the section on the geographic thesaurus in this manual.

Civic and Miscellaneous Private Groups (Local)

The P series includes documents of agencies that are not part of the local government structure but which are in a sense, their local nonpublic equivalents. They include citizen housing groups, industrial development groups, business associations concerned with central business district (CBD) revitalization, and community-sponsored social service agencies. Their reports provide commentary and supplementary data to their counterpart public agency reports. Indexing will reflect the contents of the particular document and the nature of its author.

Geographic identification is always provided for the juristiction of the agency responsible for the document. The city size and SMSA are entered as well, or counties as necessary.

Acquisitions and Publications Lists

The Q serial entries receive the most abbreviated form of indexing. The format ACQUISITIONS LISTS or PUBLICATIONS LISTS is noted, with as few descriptors as possible to describe the contents of the list. However, the descriptor SERIAL ENTRY is always added. Geographic descriptors are provided when pertinent.

Non-U.S. Materials

Series R: International Agencies – United Nations documents are valuable for statistics and definitions of housing and planning terminology. Most U.N. documents can be noted as SPECIAL REPORTS and indexed in a manner similar to that of "complete documents," unless they are bibliographies or compendiums of statistics. In the case of statistical data use the format term STATISTICS, and BIBLIOGRAPHY for bibliographies. Methodology, where enunciated, is also indicated in the content analysis.

Geographic analysis for non-U.S. place names is presently entered in natural language terms, preceded by A/ for cities, and F/ for continents, countries, and provinces. Usually U.N. materials deal with countries rather than cities and regions, and the problem of entry of smaller jurisdictions does not generally occur here.

Non-U.S. agencies – At URBANDOC these documents consist of primarily Canadian and British materials heavily oriented toward housing. The subdescriptor NATIONAL is assigned to such terms as LEGISLATION, and HOUSING PROGRAMS to differentiate such documents from those dealing with the U.S.

Geographic identification is provided for the jurisdiction of the agency issuing the document. If the document is for or about a major city, the name prefaced by A/ is entered in natural language. Provinces are prefaced by F/. Smaller jurisdictions are not entered here but in tag 97 of the descriptive analysis, in the inverted form, e.g., 97 U.K., Manchester.

Series T is devoted to documents of non-U.S. national agencies. Series U is devoted to documents of non-U.S. subnational agencies. These materials are treated in a manner similar to the G and K series.

Periodical Articles

Content analysis of Y articles has been discussed under "Indexing Characteristics of Complete Documents."

Two additional problems are those of: (a) indexing a group of articles in a journal as a single document; and (b) technical articles in cases where the Thesaurus does not include terms or concept used in the article.

Some journals, such as *Ekistics,* treat a single subject in an issue. If these articles are not individually germane to the scope of the project, they can be treated as a single document and indexed accordingly. Descriptors are assigned to the group of articles as if it were a single article. If any or all of the articles reflect the importance of place, appropriate geographic descriptors are assigned. Similarly, if personal or corporate name entries enter into the analysis from all or any of the articles, they are noted in the descriptive analysis section of the worksheet.

URBANDOC is concerned with such technical questions as transport technology and air pollution to the degree that they relate to the primary concern of planning and renewal. Articles on new forms of electric cars or the chemical components of air pollution would therefore be selected for indexing according to the criteria mentioned earlier. Indexing terms applied to such articles would tend to be generic; e.g., an article on new types of electric cars would be indexed under TRANSPORT TECHNOLOGY and AUTOMOBILES.

Geographic identification is provided only when the articles' content is very directly related to a particular jurisdiction. Entry follows the same procedures as outlined in the earlier series. In the case of non-U.S. cities and countries, only capital cities are entered, smaller units being entered under their national designation.

Thesaurus

Subject Thesaurus

The subject Thesaurus is a vocabulary of approximately 1800 descriptors authorized for document analysis in the areas of URBANDOC's responsibility: urban planning and renewal. The Combined File Search, like many other retrieval systems, is based upon matching content analysis against later search statements. The system requires that at any moment the terms that are then being used for either input or output be on a Thesaurus tape, whose interaction with the rest of the system is described in the material on the Thesaurus and Search Modules in this manual (Chapter VI) and in the *Operations Manual.* The entire subject Thesaurus is reproduced from tape in the Appendix to this manual.

The system does not specify either the method for selecting descriptors or the number. Both of these decisions were project responsibilities, the first of them is discussed at length in the *Demonstration Report*. The subject scope of the project, the sources for descriptor candidates, and the reasons for choosing particular terms are therefore not repeated in this manual.

It is only necessary to point out here that a controlled vocabulary in terms of the system is not necessarily a changeless one. URBANDOC has ample procedures, which it exercises frequently, for updating the Thesaurus. It would have been impossible to operate otherwise in an environment where subject parameters are constantly expanding by legislative and administrative actions as well as by advances in theoretical analyses. The shifts back and forth between centralization and decentralization, between social and physical planning, between voluntary and governmental initiative, must all be accounted for if the content analysis is to provide a meaningful data base.

However, the indexer must exercise restraint in assigning new terms to the Thesaurus. URBANDOC policy is to wait until a new term has appeared in a number of sources prior to initiating any additions to the Thesaurus. The analyst looks for existing synonyms or more generic terms until usage seems established. Only new programs emanating from HUD or other major governmental jurisdictions provide reason for the immediate addition of a new descriptor.

The policy decision for a short list (although not necessarily limited to the present number) was related to the problem of consistency in indexing. Even with the directives and suggestions in the preceding sections of this chapter, it was felt that limiting the descriptor possibilities would also limit the different ways in which a similar concept could be analyzed. The addition of cross-references and scope notes, although not required for computer processing, are designed to further enhance consistency in the use of the terminology.

Because the inter-relationships in this field are varied, complex, and fluid, a strictly hierarchical structure was not established in the Thesaurus, nor do the scope notes provide definitions. Rather, they display those combinations about a word that clarify its use for both content analysis and search. However, many generic-specific relationships are shown, some of them for more than one level. Unlike thesauri in the physical sciences, the URBANDOC volume does not attempt to differentiate between cause-and-effect relationships, nor between agents, processes, and properties. The URBANDOC terms deal with activities and concepts.

Single- and Multiword Descriptors

When it first became possible to perform mechanized searches by requiring the presence of two or more individual descriptors in each bibliographic record to be retrieved, there was a tendency toward the use of single-word descriptors. URBAN RENEWAL would thus be entered, and asked for, as URBAN and RENEWAL. This was called coordinate indexing, and there are still many single-word terms in the URBANDOC and other thesauri that can be coordinated with each other. However, the URBANDOC policy in this regard is to require that such terms also have stand-alone value, even though such value is only possible because of known urban orientation of the entire system. REHABILITATION as an URBANDOC descriptor is thus not likely to be confused with its medical meaning.

Many terms, however, would require such frequent coordination that it is more economical to precoordinate them. TRANSPORTATION PLANNING and REGIONAL PLANNING are more obvious cases for precoordination; ADVOCACY PLANNING and CENSUS PLANNING also seemed essential.

Arrangement

The Thesaurus is arranged alphabetically by term, relationships to the term following the term itself. Where generic relationships have been established, they are indicated by:

U — for broader term
D — for narrower term

Subdescriptors – To provide flexibility, certain terms were designated as subdescriptors. These terms can never be used alone, but only in conjunction with a descriptor. They serve to further refine meaning:

INVENTORY – descriptor

BY CITY – subdescriptor

Descriptors – Some terms, such as DESIGN and LOCATION, have indicated in their scope notes an authorization for use as either descriptor or subdescriptor. The note for DESIGN, for example, reads: "Use as a descriptor when the design factors have stand-alone retrieval value. Use as a modifier when DESIGN is a subordinate consideration."

Related Terms – Three kinds of relationships have been established:

C – a coordinated relationship
R – a related term (see also)
M – suggested subdescriptors to the descriptor

Neither the C nor the R terms are mandatory but are merely suggestive for both indexing and searching purposes and are listed below a descriptors.

All coding requisite for term entry has been deleted from this narrative for purposes of clarity.

Geographic Thesaurus

There was never any question about the desirability of geographic capabilities in the URBANDOC system, only about the most effective way of implementing geographic analysis and search. The Thesaurus Module seemed to offer the best possibilities for accomplishing this part of the project mission within the framework of the rest of the systems work. Although the simplest procedure would have been to use place names as descriptors, it soon became evident that the Thesaurus could be used to accomplish more sophisticated kinds of geographic retrieval. The system as finally developed depends on the ability of the Thesaurus Module to substitute one descriptor for another, and combines with it the ability of the Search Module to truncate from left to right on descriptors.

It is now possible to make one natural-language local place name serve as the basis for geographic analysis and search on the following additional possibilities: state name, county name, Standard Metropolitan Statistical Area (SMSA), and city size. Basically, the local place name is entered during document analysis, and the rest of the information is added to the bibliographic record during the course of File Maintenance. The major substitution is from place name to a nine-character code in which the first two characters denote state, the second three denote county, and the last four are for city. The second substitution is from place name to SMSA number, and the last substitution is from place name to a descriptor that carries the word "city size" followed by a number denoting rank according to the 1960 Census.

All three of the substitutions utilize or adapt the *Geographic Identification Code Scheme* of the Census Bureau. At the time URBANDOC was constructing its geographic thesaurus, the 1960 Census was still the backbone of the system. Since then, the Bureau has changed the state, county, and SMSA coding in preparation for the 1970 Census. Were URBANDOC to continue, it would be necessary to revise this portion of the Thesaurus accordingly. However, the basic concepts require no changes, and the following examples will not lose their validity with new numeric values for the place names. The print copy of the Thesaurus displays the geographic descriptors in three ways: natural-language terms, the SMSA numbers, and the unique numeric identifications.

Place-name listing. — The natural-language listing, arranged alphabetically, displays each entry with the terminal punctuation coding which the system's programming requires to make the automatic substitution. This section is also the one the analyst refers to in making geographic content entries in the document analysis worksheet. The full set of entries for a state, a county, and a city within a SMSA requires the following:

NEW YORK
    USE 210000000

WESTCHESTER CO., N.Y.
    USE 210600000

NEW ROCHELLE, N.Y.
    USE 210602495

NEW ROCHELLE, N.Y.*
    USE SMSA-1160

NEW ROCHELLE, N.Y./
    USE CITY SIZE-11

SMSA listing — All of the official SMSA area numbers are entered in the Thesaurus with a prefix zero (0) and are listed sequentially with appropriate cross-references to city and county. (Newly designed SMSA's are added as notice of their creation is received.) The display appears thus (minus precoding):

0SMSA-0610
    F GARY, IND.*
    F EAST CHICAGO, IND.*
    F LAKE CO., IND.*
    F PORTER CO., IND.*

Numeric identification. — The last section in the print-copy Thesaurus contains the cross-references to the place names in natural language, and any scope notes, e.g.:

210000000
    F NEW YORK. STATE.
210002505
    F NEW YORK, N.Y.
    USE FOR DISCUSSIONS ON NEW YORK CITY THAT COVER ALL 5 BOROUGHS. USE NAME OF BOROUGH OR COUNTY IF DISCUSSION RELATES SPECIFICALLY TO THAT PART OF NYC.

210010000
F ALBANY CO., N.Y.
210010030
F ALBANY, N.Y.

City-size entries. – Each city is given an indication of its size according to the Census Bureau's geographic identification scheme of 1960. This scheme provides city size ranges from 01 to 15, each unit representing a population quantity, e.g., 01 – under 200 persons; 09 – 20,000 to 29,999 persons; 15 – 1,000,000 or more. Thus, in the natural-language section of the Thesaurus, one finds:

DETROIT, MICH./
USE CITY SIZE-15
CORINTH, MISS./
USE CITY SIZE-08

The print copy geographic Thesaurus does not contain a section listing all the city-size entries by population unit because such a list would be too lengthy. However, the complete set of city-size units are entered in the subject Thesaurus as descriptors to remind analysts that searches and retrievals can be executed using anyone of them.

Noncoded U.S. place names. – Some U.S. place names and regional names have also been entered in the natural-language section of the Thesaurus even though substitution identifiers are not available. This was done for purposes of retrieval. Three types of names are entered:

New towns, e.g., RESTON, VA.
Rivers, e.g., HUDSON RIVER
Regions, e.g., CENTRAL CONNECTICUT REGION

Regional entries are made for regions having well-established regional planning agencies. The jurisdictions covered by the region are defined in accordance with the designations provided by documents issued by the agency as a scope note. For purposes of economy in cross-referencing, entries are made to the SMSA and counties whenever possible. The descriptor is then entered into the system in natural language without coding for system substitution. The analyst, of course, is cautioned to use the more specific city and county descriptors when statistical data within the document is cited in these aggregations. Example:

CENTRAL CONNECTICUT REGION
Includes northwest portion of Hartford Co., SMSA 1120 and Bristol, Burlington, and Plymouth, Conn., as defined by the Central Connecticut Regional Planning Agency in OCONNCC68RR

Non-U.S. place names. – The major problem about the census-based descriptors is that they apply only to the U.S. materials. Although the URBANDOC file is admittedly U.S.-oriented, there are too many relevant documents from and about other countries,

and from international organizations, to have a geographic system that excludes their proper analyses. Since URBANDOC lacked the resources to itself extend the Census Bureau approach to the rest of the world, it had to use other procedures.

Continents, countries, provinces, and major cities have been entered into the geographic Thesaurus as necessary. The entries are made in natural language. City entries are preceded by A/, and the larger jurisdictions by F/. Examples:

A/DELHI, INDIA.
F/MEXICO.

With this system, the only hierarchical possibilities are from specific foreign cities to all foreign cities, and from specific foreign countries to all foreign countries.

URBANDOC has since discovered that the Computer Center at the U.N. had also been working on the problem of geographic analysis, although for statistical rather than bibliographic data. There is a five-character code of which the first character represents continent, the second represents region (Western Europe), and the next three are for country. In adopting these, it would be necessary, in the present system, to add a prefix to distinguish these numbers from the U.S. ones. It would also be desirable to extend the code to cities (perhaps with provinces, etc., intervening). The techniques for entering and searching on such descriptors need not differ from those based on the U.S. Census Bureau. The advantage of a United Nations-based system is, again, the prestige of the sponsoring body.

Aggregated entries. -- When a document compares data for a large number of cities, counties, or states, individual identification is not provided. URBANDOC uses the following symbols to represent such comparisons:

B/ for cities
C/ for counties
D/ for states

Thesaurus Revisions

In terms of the system, revisions to the Thesaurus can be made at any time that additions, deletions, or other changes appear advisable; practically, individual revisions are entered manually on the printout working copies of the Thesaurus, but not made to the Thesaurus tape until sufficient in number or importance to justify the necessary systems procedures. These procedures, being geared to the requirements of the computer, are given in the *Operations Manual*. They are identical for both the subject and geographic parts of the Thesaurus.

Printouts of the revised Thesaurus tape can be made at any time, again using procedures in the *Operations Manual*. These printings can be restricted to either geographic or subject portions, or be combined. Revised office copies would probably be made more often than revisions for mass distributions. Obviously dates or some other device should be used to identify each separate edition.

The intellectual reasons for revising the Thesaurus are varied, but all relate to the dynamic nature of the literature. Most essential are the additions of new descriptors, since without them it is impossible to use new terms in the content analysis. The subject additions are made cautiously, as indicated earlier, and only after approval by the project director. The geographic additions are more automatic in terms of the decision process (but not the machine process). The reasons, and their affect on the existing files, are considered in the following paragraphs.

Any revisions to the descriptor list will affect only bibliographic records which are created subsequent to the addition of those terms to the Thesaurus tape. If there is a need to add them to records already in the system that can be accomplished by procedures described in the *Operations Manual.* They involve creating a worksheet which uses the same document number as the record being revised, and listing the new descriptors.

Deletions to the Thesaurus are optional when a term (either subject or geographic) no longer seems relevant to the URBANDOC data base. Such a decision is a matter not of guesswork but of periodic review of the Inverted File (see Chapter VI.) The Summary Listing of the Inverted File provides a numeric count of the frequency of use of each descriptor and the last date of use, and the Inverted File Detail Listing identifies the particular records, if any, in which each descriptor appears. None or little use of a descriptor as evidenced by these listings does not automatically require immediate deletion, however. The analysts may feel justified in predicting future uses of the descriptor in question, and therefore prefer to postpone an action which might otherwise require a later counteraction.

If a never-used term is eliminated from the Thesaurus, there is no effect on either the Document Master File or the Inverted File. When an infrequently used descriptor is eliminated, it will remain on both Files. In order to avoid having the Inverted File exhibit terms no longer in the Thesaurus, these descriptors can be removed from the entire system by deleting them from each record in which they occur. The necessary procedures are described in the *Operations Manual.* If desirable, substitutions can be made at the same time. They will then appear in both Document Master and Inverted Files for future use. In any case, additions or deletions to the content analysis of a document do not affect the integrity of those descriptors already in the record which are not involved in the revision.

A third kind of Thesaurus change involves the cross-references and scope notes without affecting the validity or nonvalidity of a descriptor for indexing purposes. As the document analysts acquire experience in the use of the terminology, they frequently see the necessity for refining the directives as to usage. Such changes can be entered into the Thesaurus at any convenient time. They do not, obviously, have any automatic affect on either the Master File or the Inverted File.

SEARCHING THE DATA BASE

In the over-all work flow the analytic techniques of the three preceeding chapters are followed by the computer-related techniques of the next two chapters (and also of the entire *Operations Manual*). To insert material at this point on the use of the data base may seem to break into the flow. However, by juxtaposing the intellectual elements in both the creation and use of the system, it is easier to demonstrate their interdependence.

In addition to creating the data input through the descriptive and content analysis, the document analysts are responsible for the task of preparing specifications to satisfy a search request. This section of the manual outlines the methodology used by the analysts in preparing those specifications. The process from the systems standpoint is given in the section on the Search Module in Chapter VII.

Manual Versus Machine Searching

The goal of retrieval is to provide bibliographic references that are responsive to individual user needs. Retrieval, for purposes of this discussion, indicates machine search of the system, using the Inverted (Descriptor) File and the Document Master File.

It is possible, of course, to perform manual searches in the URBANDOC system. The staff has satisfactorily answered many queries by using the hard-copy products and by-products of the system. These include the *Input Index* and printouts of the Inverted and Document Master Files illustrated later.

Individuals physically remote from the project can also make use of the *Input Index*. They may either browse through the Main Document Listing, which is arranged by type of issuing agency, or they may go first to the specialized indexes which provide access by major subject, author, title, project number, and place name. Although these are essentially single levels of search, with some ingenuity they can be combined to provide a degree of coordination.

For some kinds of queries, manual searching is mandatory in the present URBANDOC system. All the bibliographic information which is entered during the descriptive portion of document analysis must be accessed through the appropriate specialized listings. For content queries, however, there is usually a choice between manual and machine searching. It is the latter method that utilizes the full possibilities of coordination, association, and modification of concepts and relates them to locale where appropriate. Another advantage is that the computer prints out the result of the search, thus eliminating the necessity for laborious copying of bibliographic citations.

Query-Analysis Techniques

In analyzing a query in order to formulate a search statement, it is necessary to remember that retrieval is based on matching the descriptors in the search statement against the descriptors in document analyses. The directives for performing the document analysis must be kept in mind at all times. This includes not only the relevant sections of this

manual, but the cross-references and scope notes in the Thesaurus as well. Unfortunately, the original requester is not that well equipped, and there may have to be a considerable amount of "negotiation" between his query phraseology and the form in which it is submitted to the computer.

Although it may seem primitive to point out, the first task of the analyst is to determine what the user really wants to know. Is he interested in *all* "the effects of technological progress on life in the American city" or is he interested in some *specific* application of technology, such as new modes of transportation or of building construction? Is he perhaps more interested in the immediate negative effects of technology, such as dehumanization or environmental pollution? Does the user really require that the literature be restricted to the American city, or will any urban manifestation suit his purposes?

The next step is to separate the key concepts from the nonessentials; then the process of translating them into valid descriptors begins. Occasionally this requires little effort, as when the query specifies "Cooperative Housing," nothing more or less, and the length of the possible retrieval is of no concern. More typical is the case where "the effects of technological progress . . ." have been ascertained as an interest in a particular aspect, such as transportation.

In addition to checking the transportation-related terms in the Thesaurus, it will also be wise, in such a broad category, to examine the printout of the Detail Listing of the Inverted File. That examination will indicate the potential size of the retrieval and the distribution of the documents depending on the type of issuing agency. The analyst can also consult the Summary Listing of the Inverted File and find the latest date on which a particular descriptor was used in document analysis. Either listing will alert the analyst to the fact that a descriptor has never actually been used, therefore, it should not appear in the search statement.

After reviewing the various guides to the input, the analyst tries to devise a search strategy that maximizes the potential of the system and minimizes the problems. The search statement is rarely a one-to-one translation of query terms to descriptors, but more usually a combination of narrowing and broadening strategies, as discussed below.

There must also be due regard for the orientation of the data base. The URBANDOC files are urban-oriented unless specified to the contrary in a specific record. It is therefore usually unnecessary to specify urban in most queries. Some of the descriptors do include the word "urban," but only where there was no other way of expressing the idea or distinguishing between general and specific concepts, i.e., SOCIOLOGY and URBAN SOCIOLOGY. The materials are also U.S.-oriented unless specified to the contrary. It is impossible to phrase a search statement that positively asks for U.S. applications of a planning practice, for example; it is possible only to specify that non-U.S. applications be excluded.

Narrowing the Search

The narrower kinds of strategy are employed when the retrieval goal is a list of documents with one or more of the following characteristics: high proportion of relevance in terms of the total file; high degree of responsiveness in terms of specificity; and, other factors being equal, brevity in preference to inclusiveness.

Specific Descriptors

In these circumstances, the most obvious strategy is to employ specific instead of generic descriptors where possible. If the query is about current tax proposals that provide more sharing of financial resources between levels of government, then the descriptor TAX SHARING could be expected to provide a more satisfactory search than TAXATION. The same kind of relationship would seem to apply as between ZONING and LAND USE CONTROLS, and a whole host of other narrower and broader terms in a reasonably hierarchical relationship to each other.

If there has been a strict indexing policy about preferring the narrower xterms, and if the file is highly specialized, then the narrower ones could conceivably produce the longer retrieval. Certainly, in the URBANDOC file almost any form of RENEWAL would retrieve more than the very general URBAN AFFAIRS.

Coordination

A second strategy for narrowing a search is the requirement that two or more descriptors must be present in order for any bibliographic records to qualify as "hits." The coordination of two rather broad terms: TAXATION and INTERGOVERNMENTAL RELATIONS would be a second logical approach to the question of sharing financial resources, although perhaps less effective. The problem is that such a search depends on the two terms appearing together in bibliographic records because they relate to each other as well as to the document itself. This is not always the case, as each descriptor could be only independently relevant.

The indexer cannot worry about accidental associations of descriptors appearing deliberate during the search process. (Attempts in other systems to establish the presence or absence of linkages between descriptors do not appear to be helpful additions to the URBANDOC group of strategies.)

Actually, the association of descriptors is very successful in obtaining precision and relevance when one or more are geographic in nature – specific places or city sizes. This is also true if one of the parameters in the AND relationship is a year of publication or type of issuing agency (using the prefix of the document number and the truncation symbol in the search statement). In all three situations, the goals of relevance and specificity are enhanced by the fact that the second descriptor in the statement is so exact, a quality that is also furnished by format and program descriptors.

Subdescriptors

There is a third approach to the larger problem of narrowing the search: adding modifiers, or subdescriptors, to the descriptors in the search statement. Although this is completely reasonable in terms of both the logic and the system, there are two problems. First, there is no systems guide to the use of subdescriptors, as they do not appear in the Inverted File. It is therefore impossible to know for a certainty that particular subdescriptors have indeed been entered into the system, let alone in relation to which descriptors. Second, it is more difficult to guarantee inter-indexer consistency in the use of subdescriptors, despite the general directives in both this manual and the Thesaurus.

Subsets

A fourth narrowing technique is to specify a particular subset of the Document Master File for searching purposes. The series arrangement of the records (accomplished by the document identification number as explained earlier in the manual) provides a logical basis for considering the file by subset, An example of this narrowing technique in practice is to ask for all documents on TAX SHARING in the G series (state documents).

URBANDOC specifies the subset to be searched by using the initial character in the document as a descriptor in an AND relationship. Since the document number in its entirety is the actual descriptor in each record, it is necessary to add the truncation symbol after the series character in writing the search statement. It is also necessary to precede it with the document number symbol to eliminate subject terms beginning with the same letter as the subset.

Although this technique sounds more like a variation of the AND relationship than a separate technique, the concept of dividing the data base into subsets is fundamental. The larger the Document Master File, the more essential will it be to provide some kind of subset possibility in order to shorten the search time. A version of the Combined File Search that has been developed for the IBM 360 does in fact make it possible to specify different data bases (or subsets of one unified data base) for both storage and retrieval.

Broadening the Search

Many requests for bibliographic searches can be more successfully filled if the analyst broadens the original query phraseology. This approach is appropriate in one or more of the following situations: the retrieval goal is inclusiveness; a general rather than specific query is involved; there are logical alternatives in the way of phrasing the query. The techniques for broadening the search are, in the main, the "opposite side of the coin" from those described for narrowing.

Generic Descriptors

The most obvious strategy is to employ generic descriptors wherever possible: RENEWAL instead of REHABILITATION, TRANSPORTATION instead of MASS TRANSPORTATION. It is not necessary to guess at more general terms; they are indicated in the Thesaurus, just as are the reverse relationships.

However, generic descriptors alone cannot be depended upon for broadening all types of searches. Two kinds of indexing policies may cause them to be omitted from bibliographic records where they might otherwise be expected to be found. One is the policy to prefer specific terms and the other is the limitation on the amount of "up-posting." The latter relates to the very difficult matter of how many broader descriptors should be entered just in order to provide search capability on a very general basis. (It is possible to construct bibliographic systems with automatic "up-posting." This was not a feature of the original Combined File Search System and hence was not tested by URBANDOC.)

Alternatives

A more dependable way of achieving search expansion is to employ alternative descriptors in an OR relationship. As many as thirty-five descriptors can be used in this way in one search statement, and any conceptual relationships between the descriptors does not affect the search. It is therefore possible to specify the OR relationship between two or more specific descriptors, such as BUSES and SUBWAYS, or between specific and generic descriptors, such as BUSES and RAPID TRANSIT.

Although it is difficult to imagine a query which would require the use of the entire OR capability, it is obvious that generalized searches are possible with the OR use of many specific descriptors.

Overriding subdescriptors

When searching, the computer does not differentiate between modified and unmodified descriptors unless modification is specified in the request. By leaving out such specifications the search is therefore automatically broader than in the reverse situation. This strategy is most effective in the case of descriptors that are frequently modified, such as LEGISLATION, which usually had attached to it either FEDERAL, STATE, or MUNICIPAL.

Truncation

The strategy of broadening a search by use of truncation does not have an opposite number in the group of strategies that narrow a search, since it is assumed that whole descriptors are used unless there is evidence to the contrary. The evidence is the truncation symbol ($).

This feature of the search system makes it particularly easy to broaden the geographic portion of a search. It may be necessary, for example, to look for all material on HOUSING PROGRAMS in the state of Washington, not just those specifically on the Seattle programs. If a search on HOUSING PROGRAMS for Seattle (910321220 using the Census Code) does not turn up sufficient information, it may be useful to ask instead for HOUSING PROGRAMS AND 91$ ($ being the truncation symbol). This will broaden the search from Seattle to the entire state of Washington.

The same technique can also be used on words. Placing the symbol after HOUSING, for example, would direct the computer to search for all records in which there is a descriptor starting with the single word HOUSING. It would therefore include HOUSING, HOUSING PROGRAMS, and HOUSING THE ELDERLY. Unfortunately, the present URBANDOC system does not have the ability to "mask" as well. This would have made it possible to ask for HOUSING in a way that would include PUBLIC HOUSING as well.

Mixed Strategies

Although most search strategies employ either narrowing or broadening techniques, the situation is not one of "either/or" as much as "either and/or." In other words, elements of both narrowing and broadening techniques can be employed in one query. The only problem is that the total number of descriptors used cannot exceed 35. If all 35 are used to cover every possible contingency in terms of subject in an OR relationship, then none would be left to limit the coverage to one geographic area in an AND relationship. Actually it is hard to visualize an URBANDOC-type search which would tax the system's capacity for handling numbers of descriptors at a time, no matter what the relationship.

It must also be remembered that the system can process a great many separate queries at one time. It may therefore be advantageous to devise alternative search statements for a single query which presents problems.

Search Statements

Logical Expressions

Once the individual descriptors have been selected, they are combined in a logical framework to express the relationships inherent in the request as the search statement. These statements are keypunched according to the directions in the *Operations Manual.* Singly or in batches they are processed by the programs in the Search Module, described also in the *Operations Manual.*

As the preceeding discussion indicates, the descriptors may be combined in an AND, OR, or AND NOT relationship. The AND relationship reduces the possibilities of a "hit" – a successful response – by requiring the presence of two or more terms. The OR relationship broadens the chance of a hit by expanding the number of qualifying conditions. The AND NOT relationship neither broadens nor narrows the ways in which a descriptor may qualify for retrieval. It simply removes a portion of the file from consideration, and the remaining references are examined as specified in the search statement.

The search statement combines the selected descriptors with symbols for the logical operations done by the computer. The symbols are, thus, called "operators." The logical relationship between descriptors, expressing AND, OR and AND NOT are represented by the symbols (*), (+) and (/) respectively in the URBANDOC system. The logic symbols for use between descriptor and subdescriptor are represented by (E) and (N), indicating the positive and negative relationships. In all instances, the descriptors are entered in the search statement exactly as they appear in the Inverted File Summary Listing.

Sample Statements

The following examples illustrate the use of search logic, operators, descriptors, subdescriptors, and truncation. Symbols A, B, and C are used to represent the descriptors, expressed in relationship to each other through the use of the operators.

(1) AND logic — A*B

A: air resources plans
B: councils of government

Document must contain descriptors A AND B.

(2) OR logic — A+B

A: action programs
B: poverty programs

Document must contain either descriptor A OR B. It may contain both, but this is not required.

(3) AND NOT logic — A/B

A: zoning
B: geo

Document must contain descriptor A AND NOT descriptor B. That is zoning in general, *not* geographically oriented.

(4) AND and OR logic — A*(B+C)

A: renewal planning
B: city size 04
C: city size 04

Document must contain descriptor A AND descriptor B OR descriptor C. City size indicates population range.

(5) MODIFIED BY logic — A

A: intergovernmental relations E federal-city

Document must contain descriptor A modified by term following the symbol E. A represents the term and its modifier, as a single term.

(6) NOT MODIFIED BY logic — A

A: intergovernmental relations N federal-city

Document must contain descriptor A but may NOT BE MODIFIED BY the modifier following the symbol N.

(7) MODIFIED BY – OR – logic A+B

A: intergovernmental relations E federal-state
B: intergovernmental relations E federal-city

Document must contain descriptor A and its modifier OR descriptor B and its modifier. This eliminates all documents in which intergovernmental relations is not modified at all, or is modified by state-municipal.

(8) MODIFIED BY – AND – logic A*B

A: recreational facilities E inventory
B: recreational facilities E by-county

Document must contain descriptor A and its modifier, AND descriptor B and its modifier; in this case the descriptor is a single term, modified twice.

(9) TRUNCATION A*B

A: waste management
B: O$

Document must contain descriptors A AND B. In this case B represents all documents in the O series, regional and metropolitan planning agencies.

Retrieval Reports

The results of the search are displayed in a computer-produced printout which URBANDOC calls the *Retrieval Report.* The usual format for this report is the one on the following page, where the entire bibliographic record for each citation is reproduced. (Only missing are some of the systems symbols.) The citations are in document number sequence, with the content analysis preceding the descriptive analysis for each document. The search statement, the name of the requester, the date of the request, and the search number (in the processing batch) are printed at the top of each page of the report. Descriptive analysis can be omitted if desired.

URBANDOC has an alternative search program (the original one in the Combined File Search System), which is less attractive but offers more options for the *Retrieval Report.* Using those programs, it is possible to restrict the output to document numbers alone or document numbers with combinations of descriptive analysis and all, some, or none of the bibliographic elements.

RETRIEVAL REPORT EXAMPLE

```
[1]12/01/70
      [2]8 R[3]   I 08 7012
   [4]INFORMATION SYSTEMS FOR THE STATE OF MINNESOTA

[5]GMINNSP69BR        [6]****************************************

 SEARCHABLE SECTION
[7]  =GMINNSP69BR
     ADMINISTRATIVE ORGANIZA
     DATES                        PUBLICATION  S54196900  ENTRY
     GEO
     HEALTH PLANNING
   [A]INFORMATION SYSTEMS
     PUBLICATIONS LISTS
     SPECIAL REPORTS
     STATE PLANNING
     TECHNICAL ASSISTANCE
   [B]410000000
     FREE TEXT SEGMENT 002
[8]   MINNESOTA. STATE PLANNING AGENCY
     FREE TEXT SEGMENT 011
      BIENNIAL REPORT TO THE MINNESOTA LEGISLATURE, 1967-1969
     FREE TEXT SEGMENT 021
      ST. PAUL. JAN. 1969. 22P
     FREE TEXT SEGMENT 056
      CAPITOL SQUARE BLDG., 550 CEDAR ST., ST. PAUL, MINN.
     FREE TEXT SEGMENT 097
      MINN.
   SUBJECT HEADINGS
        6ASTATE PLANNING
        6BPUBLICATIONS LISTS
```

LEGEND

[1] Date of Search
[2] Request Number
[3] Indicator of Retrospective Search
[4] Natural Language Search Statement
[5] Document Identification Number for Retrieval Reference
[6] Indication of Start of New Reference
[7] All Descriptors Assigned to the Document
[A-B] Descriptors Satisfying the Search Request, Causing Document Reference to be Retrieval. (Note: [B] Is A Geographic Code for the State of Minnesota.)
[8] For Explanation of the Free Text Segment Numbers, see Figure 3, General Manual.

Figure 6

SYSTEMS MODULES: INPUT

Thesaurus Module

Function

Computer searching requires an exact match of the terminology describing the documents and the terminology describing a request. In light of such a requirement, the Thesaurus Module becomes one of the principal elements in the URBANDOC information system. It serves as editor and guide for several major functions within the system. First, in hard-copy form, it provides a guide to the accepted and common vocabulary for URBANDOC's indexing and search purposes. When searching, the hard-copy form provides a manual guide to the most effective manner of phrasing and structuring the inquiries against the file of documents. Second, in its machine-readable form, the Thesaurus File is used as an automatic validation device for the content analysis terms of the documents.

The functions that were included in the basic CFS package were:

Validation of the input to the thesaurus for proper coding and format specifications;

Conversion of the input to the thesaurus to a format suitable for further computer processing;

Updating of the thesaurus by the addition, deletion, or revision of terms;

Production of new versions of the thesaurus, in both machine-readable and hard-copy form.

However, experience with the use, maintenance, and publication of a thesaurus indicated that other functions were necessary to render the Thesaurus Module complete. URBANDOC's expansion of the Thesaurus Module consists of adding peripheral products that facilitate the manual use of the hard-copy Thesaurus. These new products may be produced either during the basic update or on demand.

Tasks

The Tasks and products of the module are:

Task #1: To prelist the Thesaurus Input. The Prelist was designed primarily to assist the document analyst for proofreading, error detection, and correction purposes. This listing provides an audit trail in that it is a record of all the changes made in the Thesaurus during any one update cycle. The coding and format of the input is checked for the document analyst and detected errors are noted. All corrections can be made prior to the actual update of the Thesaurus File.

Task #2: To format the Thesaurus Input to update the Thesaurus File.

Task #3: To update the Thesaurus File. Additions, deletions, and revisions are made as indicated by the input after further validation of the input. A listing is produced of deleted terms and detected errors.

Task #4: To print the Thesaurus, either the entire file, the subject portion or geographic portion. The hard-copy Thesaurus provides for manual use of the vocabulary file. The Thesaurus entries indicate the term's possible uses and its relationships to other terms in the Thesaurus. The hard-copy format may be varied slightly through the use of the print options; the standard format is illustrated in Figure 8.

Task #5: To analyze the contents of the Thesaurus File by type and validity of usage in searching. Once the Thesaurus has been updated, the only statistical information provided by basic CFS is the total number of entries in the file. URBANDOC found it helpful to have additional breakdowns, such as the number of subject and geographic terms, the number of descriptors and subdescriptors, the number of terms valid for search, etc. It is these, and other counts, that are provided by the Statistical Analysis. The report is most helpful on reviewing the contents and structure of the Thesaurus. The report format is illustrated in Figure 9.

Task #6: To update the Permuted Thesaurus, both in hard-copy and machine-readable form. The terms in the Thesaurus are in alphabetical sequence. Since many of the entries are multi-word terms, the Thesaurus could be interpreted as being in sequence by the first word of each term. Lack of familiarity with the total vocabulary could make it difficult for the general user or novice to locate or express certain concepts in the language of the URBANDOC Thesaurus. The Permuted Thesaurus attempts to solve this problem by providing the user with access to each term by any word in the entry. Thus, he may locate a term in the Permuted Thesaurus and then access the major thesaurus listing. For example, consider some of the terms referencing housing: PUBLIC HOUSING, RENTAL HOUSING, SEASONAL HOUSING, LEASED HOUSING, etc. The Permuted Thesaurus provides the user with the ability to access any of these terms by the general concept of HOUSING. A sample of the Permuted Thesaurus is illustrated in Figure 10.

Task #7: To produce a supplement to the URBANDOC Thesaurus, both in hard-copy and machine-readable form, of revised and new terms. The publication of a hard-copy Thesaurus reflects the contents of the file as of the date of the printout. Subsequent additions and revisions to the Thesaurus will not be reflected in hard-copy form until the next edition. URBANDOC felt it would be desirable to be able to update an edition of the Thesaurus without having to reprint the entire volume. The supplement is identical in format to the main Thesaurus. However, the former usually includes the dates of entry and revision for the terms. A sample page of the supplement is shown in Figure 11.

THESAURUS MODULE: GENERAL LOGIC OF COMPUTER PROCESSING

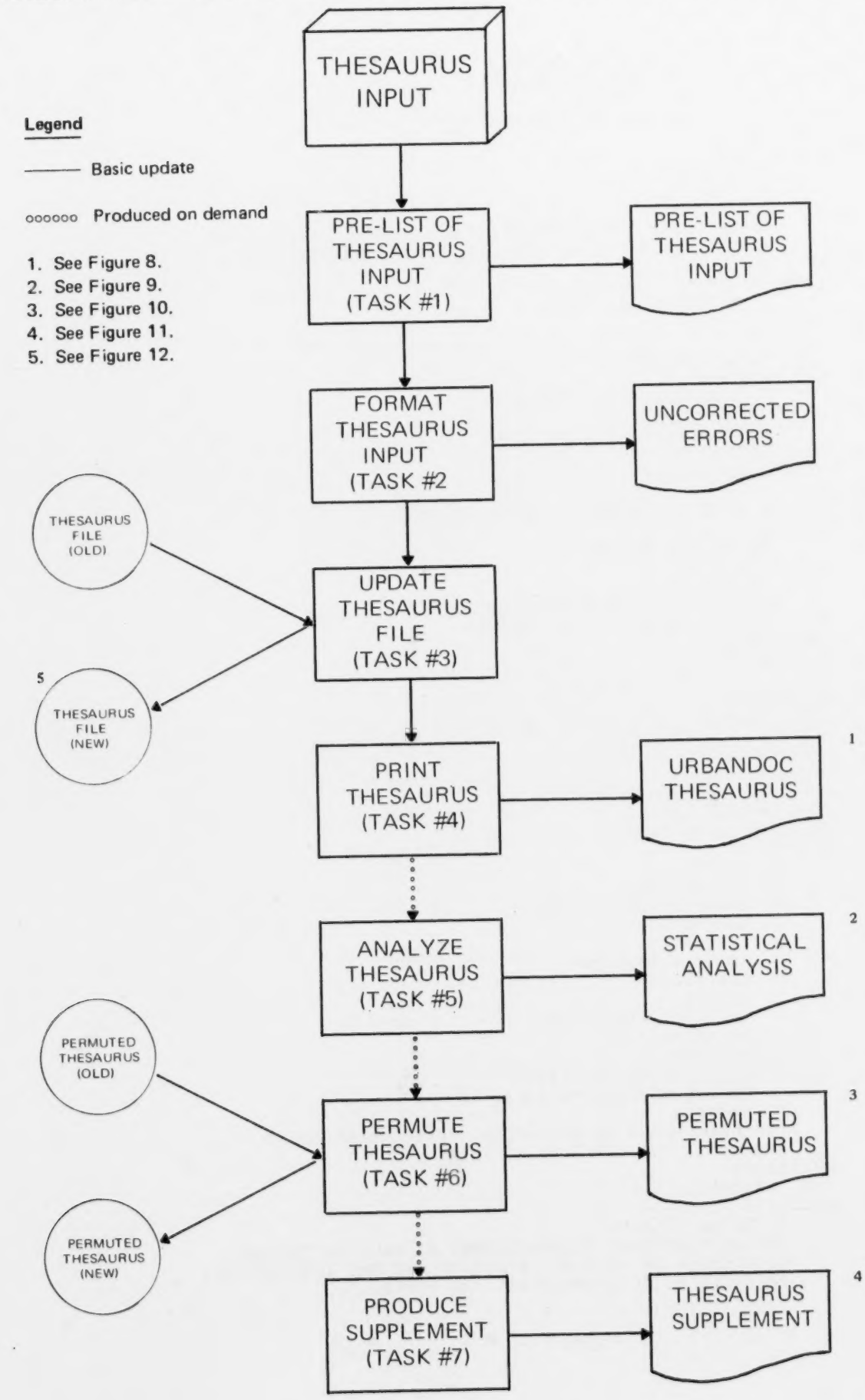


Figure 7

URBANDOC THESAURUS: DISPLAY

```
        D  MEDICAL SERVICES
        D  MENTAL HEALTH SERVICES
        D  FAMILY PLANNING SERVICES
        R  SOCIAL SERVICES
B  *HEALTH, EDUCATION AND WELFARE DEPT.
    USE  *HEW
B  *HEARINGS
        U  FORMATS
        M  STATE
        M  FEDERAL
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.  USE
        ALSO LEGISLATIVE HISTORY AS SUBJECT DESCRIPTOR.
B  *HEATING
    USE  *THERMAL CONTROLS
        U  BUILDING EQUIPMENT
S   HEAVY SERVICE
B  *HEIGHT
    USE  *BULK, HEIGHT
B  *HELICOPTERS
        U  VERTICAL RISE AIRCRAFT
B  *HELIPORTS
        U  AIRPORTS
B  *HETEROGENEITY
    USE  *HOMOGENEITY
B  *HEW
        F  HEALTH, EDUCATION AND WELFARE DEPT.
B  *HHFA
        SUPERCEDED BY HUD
B  *HIGH SCHOOLS
    USE  *SCHOOLS
        FULL SUBSTITUTION SCHOOLS/SECONDARY
B  *HIGH SPEED GROUND TRANSPORTATION
    USE  *HSGT
B  *HIGH-INCOME
        U  INCOME-LEVEL
B  *HIGH-RISE
    USE  *SCALE
S   HIGHER
B  *HIGHEST USE
    USE  *BEST USE
B  *HIGHWAY BEAUTIFICATION
    USE  *ROADSIDES
B  *HIGHWAY MAINTENANCE
B  *HIGHWAYS
        F  ROADS
        U  CIRCULATION
        U  CIRCULATION ELEMENTS
        D  EXPRESSWAYS
        D  PARKWAYS
        D  TRUCKS, TRUCKING
        D  ROADSIDES
        C  ACCESS
        M  UNDER CONSTRUCTION
        M  ARTERIAL
        C  RESEARCH
        C  ELEVATED CONSTRUCTION
        C  DEPRESSED CONSTRUCTION
        R  BY-PASS
        FOR DISCUSSION OF COMMERCIAL DEVELOPMENT ALONG
        HIGHWAYS, USE COMMERCIAL STRIPS.
B  *HILLSIDES
    USE  *SLOPES
B  *HISTORIC PLANS
        R  URBAN HISTORY
        INCLUDES GRAPHIC PRESENTATIONS AS WELL AS TEXTUAL
        DISCUSSION OF ANCIENT, MEDIEVAL AND PRE 20TH CENTURY
        EXPRESSIONS OF URBAN PLANS AND FORMS.
```

Figure 8

STATISTICAL ANALYSIS REPORT

```
6037 TOTAL THESAURUS TERMS
3071 TERMS VALID FOR SEARCH
5881 TOTAL DESCRIPTORS
2924 DESCRIPTORS VALID FOR SEARCH
 156 TOTAL SUBDESCRIPTORS
 147 SUBDESCRIPTORS VALID FOR SEARCH
5581 VALID DESCRIPTORS, NO NARROWER TERM
 774 VALID DESCRIPTORS WITH BROADER TERM
4976 VALID DESCRIPTORS NO NARROWER, BROADER TERM
 643 TERMS WITH RELATED ENTRIES
1622 TOTAL NON-GEOGRAPHIC TERMS
1297 NON-GEOGRAPHIC VALID FOR SEARCH
4259 TOTAL GEOGRAPHIC TERMS
1627 GEOGRAPHIC VALID FOR SEARCH
1262 BUREAU OF CENSUS CODES
 228 SMSA ENTRIES
2769 PLACE NAMES
1420 PLACE NAMES AUTHORIZED AS CENSUS CODES
 810 GEOGRAPHICS AUTHORIZED AS SMSA CODES
  21 GEOGRAPHICS AUTHORIZED AS CITY SIZE 1
   6 GEOGRAPHICS AUTHORIZED AS CITY SIZE 2
  17 GEOGRAPHICS AUTHORIZED AS CITY SIZE 3
   8 GEOGRAPHICS AUTHORIZED AS CITY SIZE 4
   7 GEOGRAPHICS AUTHORIZED AS CITY SIZE 5
  33 GEOGRAPHICS AUTHORIZED AS CITY SIZE 6
  34 GEOGRAPHICS AUTHORIZED AS CITY SIZE 7
  44 GEOGRAPHICS AUTHORIZED AS CITY SIZE 8
  16 GEOGRAPHICS AUTHORIZED AS CITY SIZE 9
  74 GEOGRAPHICS AUTHORIZED AS CITY SIZE 10
 146 GEOGRAPHICS AUTHORIZED AS CITY SIZE 11
  74 GEOGRAPHICS AUTHORIZED AS CITY SIZE 12
  31 GEOGRAPHICS AUTHORIZED AS CITY SIZE 13
  16 GEOGRAPHICS AUTHORIZED AS CITY SIZE 14
  11 GEOGRAPHICS AUTHORIZED AS CITY SIZE 15
   1 GEOGRAPHICS AUTHORIZED AS CITY SIZE 0
```

Figure 9

PERMUTED THESAURUS: DISPLAY

```
                PUBLIC FINANCE
                       FINANCE
                 STATE FINANCE
                       FINANCIAL ASSISTANCE
                       FINANCIAL ASSISTANCE (CONT)
                       FINANCIAL PROGRAMMING
                       FINANCIAL SOURCES
              MORTGAGE FINANCING
                       FINANCING
                       FINANCING CHARGES
                       FIRE ESCAPES
                       FIRE FACILITIES
                       FIRE INSURANCE
                       FIRE PREVENTION
                       FISCAL PLANNING, POLICY
             HUNTING, FISHING
                       FISHING INDUSTRY
                       FLEXIBLE
                       FLOOD PLAINS
                       FLOOD PLAINS ZONING
                       FLOOD PROTECTION
                       FLOOR AREA RATIO
                       FLOOR SPACE AREA
                       FLOORSCAPE
                       FNMA
                       FOOD SUPPLY
                 LABOR FORCE
                       FORECASTING
                       FORECASTS
                       FORECLOSURES
            FORESTS, FORESTRY
                       FORESTS, FORESTRY
                URBAN FORM
                URBAN FORM (CONT)
                       FORMATS
                       FORMATS (CONT)
                       FORMATS (CONTA)
                       FORMATS (CONTB)
                       FORMS
                       FOUNDATION PARTICIPATION
        BASEMENTS, FOUNDATIONS
                       FRANCHISES
                       FREIGHT
                       FRINGE AREAS
                       FRINGE BENEFITS
                       FRONTAGE
                       FUEL
                SOCIAL FUNCTIONS
              PENSION FUNDS
                       FUNDS
               RENEWAL FUNDS
                STREET FURNITURE
                       FURNITURE, EQUIPMENT
               GAMING, GAME THEORY
                       GAMING, GAME THEORY
                       GARAGES
                       GARDEN APARTMENTS
                       GARDEN CITIES
            BOTANICAL GARDENS, ARBORETUMS
                       GAS
                       GEO
                       GEOGRAPHERS
                       GEOGRAPHIC IDENTIFICATION
             ECONOMIC GEOGRAPHY
                       GEOGRAPHY
                URBAN GEOGRAPHY
                       GEOLOGICAL RESOURCES
                       GHETTOS
                       GIFTS
                       GLOSSARIES
                       GNRP
                       GNRP APPLIC
                       GOALS
                       GOLF COURSES
                 LOCAL GOVERNMENT
             MUNICIPAL GOVERNMENT
              REGIONAL GOVERNMENT
               FEDERAL GOVERNMENT
          COUNCILS OF GOVERNMENT
                COUNTY GOVERNMENT
       SUB-NATIONAL GOVERNMENT
                 STATE GOVERNMENT
                       GOVERNMENTAL SERVICES
METROPOLITAN AREA GOVT
                       GRADE CROSSINGS
              LOAN, GRANT APPLIC
           CAPITAL GRANT APPLIC
                       GRANTS
                       GRAPHIC ARTS
                       GRAPHIC DISPLAYS
                       GRAPHICS
            COMPUTER GRAPHICS
                       GRAPHS
                       GRAVITY MODELS
                       GREEN BELTS
                       GRIDS
                       GROSS
                       GROUP DYNAMICS
                       GROUP HEALTH FACILITIES
                       GROUP QUARTERS
            MINORITY GROUPS
  PUBLIC INTEREST GROUPS
         SPECIAL GROUPS
                       GROWTH
                       HAA
       LOCAL CITY HALLS
     EXHIBITION HALLS
                       HANDICAPPED
          MENTAL HEALTH
          PUBLIC HEALTH
                       HEALTH FACILITIES
           GROUP HEALTH FACILITIES
                       HEALTH PLANNING
                       HEALTH RESORTS
          MENTAL HEALTH SERVICES
                       HEALTH SERVICES
                       HEARINGS
                       HEAVY SERVICE
             BULK, HEIGHT
                       HELICOPTERS
                       HELIPORTS
                       HEW
                       HHFA
                       HIGH-INCOME
                       HIGHER
                       HIGHWAY MAINTENANCE
                       HIGHWAYS
                       HISTORIC PLANS
                       HISTORIC PRESERVATION
                       HISTORIC SITES
                       HISTORICAL DEVELOPMENT
      LEGISLATIVE HISTORY
                       HISTORY
                URBAN HISTORY
                       HOME OWNERSHIP
                       HOME OWNERSHIP PROGRAMS
              NURSING HOMES
           RETIREMENT HOMES
                       HOMESTEAD
                       HOMOGENEITY
                       HOSPITALS
                       HOTELS, MOTELS
                       HOURLY
                       HOURS OF LABOR
                       HOUSEHOLDS
                       HOUSEKEEPING
                       HOUSES
    ROOMS, ROOMING HOUSES
              ROW HOUSES
            PATIO HOUSES
         ATTACHED HOUSES
        LOW-COST HOUSING
          LEASED HOUSING
          MOBILE HOUSING
        LOW-RENT HOUSING
                       HOUSING
          RENTAL HOUSING
          PUBLIC HOUSING
  SCATTERED SITE HOUSING
     NON-PROFIT HOUSING
           OPEN HOUSING
     PIGGY-BACK HOUSING
        COLLEGE HOUSING
      TRANSIENT HOUSING
      TEMPORARY HOUSING
      SELF-HELP HOUSING
          RURAL HOUSING
       SEASONAL HOUSING
           USED HOUSING
     VESTPOCKET HOUSING
                       HOUSING ASSIST
        COLLEGE HOUSING ASSIST
                       HOUSING AUTHORITIES
                       HOUSING CODES
                       HOUSING DEMAND
                       HOUSING ECONOMICS
                       HOUSING PROGRAMS
                       HOUSING STARTS
                       HOUSING STOCK
                       HOUSING THE ELDERLY
                       HSGT
                       HUD
                       HUD DIRECTIVE
                       HUD LIBRARY
                       HUMAN FACTORS
                       HUMAN RELATIONS
```

Figure 10

THESAURUS SUPPLEMENT: DISPLAY

X	D-DESCRIPTOR, S-SUBDESCRIPTOR, B-BOTH.....	ORIGINAL---REVISED DATE
B	*AERIAL PHOTOGRAPHY	03/31/69
B	*BICYCLING	04/14/69
B	*BUFFER STRIPS	03/31/69
	U ZONING REQUIREMENTS	
B	*BUSING	03/31/69
	USE *PUPIL TRANSPORT	
B	*CAPITAL IMPROVEMENTS	03/31/69
	R CAPITAL BUDGETS	
B	*HOUSING DEMAND	01/06/69
	R HOUSING STOCK	
B	*HOUSING STARTS	01/06/69
	R HOUSING STOCK	
B	-INPUT INDEX $	07/05/69
	INDICATES INPUT INDEX ISSUE IN WHICH THE DOCUMENT IS LISTED.	
B	*JOINT PROJECTS	03/31/69
	R INTERGOVERNMENTAL PROGRAMS	
B	*LAND BANKS*	03/31/69
	R LAND RESOURCES	
B	*LAND TAX *	01/10/69
	U TAXATION	
	R REAL PROPERTY TAXES	
B	*LANDSCAPING	03/31/69
B	*LOW-COST HOUSING	03/31/69
B	*MASS TRANSP. DEMO REPORTS	01/10/69
	F MASS TRANSPORTATION DEMO REPORTS	
	U FORMATS (CONTB)	
	APPLIES TO PROJECTS FUNDED BY HUD UNDER SECTION 103B, HOUSING ACT OF 1949, AS AMENDED BY SECTION 303, HOUSING ACT OF 1961	
B	*MEGASTRUCTURES	03/31/69
	U BUILDINGS	
B	*MINING AND EXTRACT IND	04/24/69
	F MINING AND EXTRACTIVE INDUSTRIES	
	U RESOURCE PRODUCTION	
	D QUARRYING	
	R NATURAL RESOURCES	
	R LAND USE	
	R RECLAINATION	
	R GEOLOGICAL RESOURCES	
B	*MINING AND EXTRACTIVE INDUSTRIES	04/24/69
	USE *MINING AND EXTRACT IND	
B	*NEIGHBORHOOD DEVEL PROG	04/24/69
	F NEIGHBORHOOD DEVELOPMENT PROGRAMS	
	R RENEWAL AREAS	
	03/31/69 HOUSING AND URBAN DEVELOPMENT ACT OF 1968	
B	*NEIGHBORHOOD DEVELOPMENT PROGRAMS	04/24/69
	USE *NEIGHBORHOOD DEVEL PROG	
B	*PERSON IDENTIFICATION	04/14/69
	R DATA BANKS	
	R CONFIDENTIALITY	
B	*PHYSIOGRAPHY	01/06/69
	R CLIMATE	
	R SOILS	
	R WATER RESOURCES	
	R GEOLOGICAL RESOURCES	
B	*PROGRAMMED LEARNING	03/31/69
	R TEACHING MACHINES	
	R TRAINING PROGRAMS	
B	*PUBLIC-PRIVATE SECTOR	03/31/69
B	*REGIONAL GOVERNMENT	03/31/69
S	REGIONAL-LOCAL	03/31/69
	M INTERGOVERNMENTAL RELATIONS	
B	*REVENUE SHARING	03/31/69
	R TAX SHARING	

Figure 11

Thesaurus File Description

The Thesaurus File (or Dictionary File, as it is known in CFS) is a control file for the authorized content analysis terms. This file is used to validate the descriptors, indicate the correct usage of a term to the analyst, and make the substitutions from natural language descriptors to codes for the geographic analysis.

The Thesaurus File actually consists of subject and geographic terms for content analysis. The subject portion of the Thesaurus File, available in hard-copy form, is known to the user. The geographic portion, as yet unpublished, consists of place names, SMSA codes, and city size designations according to the Census Bureau Code. These entries indicate the numerical code to be used in place of the geographic natural language entry. Reverse cross-references from code to name are also included.

The Thesaurus File is maintained on magnetic tape. Each term forms an individual record. Records are stored on the file in sequence by term, with no limit to the number of terms that can be included. (See Figure 12.) Because of the computer's collating sequence, the Thesaurus File falls into three major sections: the subject terms, the natural language geographic terms, and the numerical codes for the geographic terms. The Thesaurus can be published as a whole or by section, either subject or geographic.

The Thesaurus File for each term has three areas. The first of these, the Program Utility Section, contains information used only by the programs in their processing. It provides the programs with such data as the size of the term, the number of cross-references, and the indication of the presence of a substitute.

The second area, the Term Section, is used by both the analyst and the File Maintenance Module. The File Maintenance Module uses it for the validation of the descriptors and the substitution of the geographic codes for the natural language place names. Each term is classified for use either as a descriptor, subdescriptor or both.

A descriptor can contain all but the following symbol code characters: (,), *, $, +, and ●. An entry in the Thesaurus can be as large as fifty-four characters. The first character of the Thesaurus entry is the precode, a character indicating the descriptor's status for searching. A (*) code indicates a precise descriptor (a term that can be searched alone). A (#) code indicates a common descriptor (a term with such a high frequency of usage that it has little or no value when searching alone). Except for a few terms, the URBANDOC descriptors are all precise.

A subdescriptor or second-level descriptor further qualifies the meaning and/or use of a descriptor. While having the same character composition restrictions as a descriptor, it has the additional restriction of starting with an alphabetic character. A subdescriptor is limited to twelve characters and requires no coding.

In certain instances a cross-reference in the Thesaurus may cite another form for inclusion. For example, in Figure 8 the term HIGH SCHOOLS appears with a substitute of SCHOOLS and a note that the full substitution should be SCHOOLS/SECONDARY. In this instance, the definition of the length of a descriptor and subdescriptor may become confusing.

On the Thesaurus File, there are the following three records: HIGH SCHOOLS, SCHOOLS, and SECONDARY. The terms HIGH SCHOOLS and SCHOOLS are descriptors and as such could have been no longer than fifty-four characters in length. The term SECONDARY is a subdescriptor and as such could have been no longer than twelve characters in length. The full substitution note SCHOOLS/SECONDARY indicates to the document analyst that a descriptor and a subdescriptor are to be used to create the effect of HIGH SCHOOLS. The slash character, which in this case indicates the coordination of a descriptor and subdescriptor, has no relation to the discussion of term length.

The last section, the Cross-reference Section, is used by the document analyst. The system does not use this data. In addition to the cross-references, this section also may contain scope notes indicating usage of the term.

Thesaurus Module: Program Inventory

Task #	Function	AUTOCODER Program	Processing Cycles
1	Prelist Thesaurus Input	XMAIN0	Editing and Validation, Input Processing
2	Format Thesaurus Input	XMAIN1	Editing and Validation, Input Processing
3	Update the Thesaurus	XMAIN2	Editing and Validation, Input Processing
4	Print the Thesaurus	XMAIN3	Editing and Validation, Input Processing
5	Analyze the Thesaurus	XMAIN4	Editing and Validation, Input Processing
6	Print the Permuted Thesaurus	XMAIN5	Editing and Validation, Input Processing
7	Produce a Thesaurus Supplement	XMAIN6	Editing and Validation, Input Processing

(See also Program Inventory in the *Operations Manual* for greater detail.)

THESAURUS FILE RECORD LAYOUT

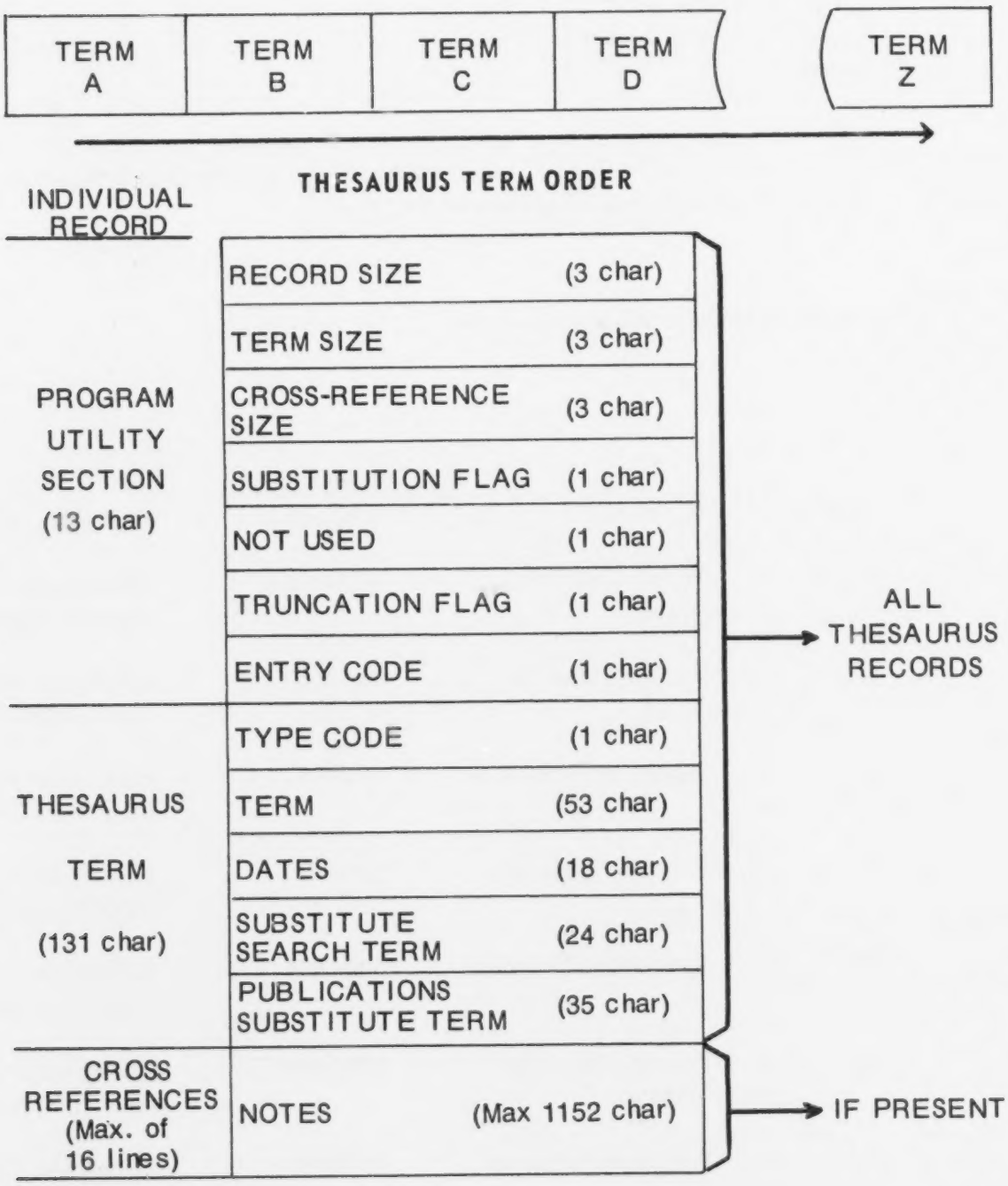


Figure 12

Pre-Edit Module

Function

The Pre-edit Module is a product of evolution, having taken its current form in response to the working needs of the document analysis staff. At its conception, the sole function of the Pre-edit Module was to facilitate detection of errors in the Document Input. This module now handles several functions.

Tasks

Task #1: To generate complete Document Input and test the input for control characters and fields for the standard units of information. Certain data had previously been entered twice onto the document worksheet: the document number as both document number and descriptor; the subject headings as both subject headings and descriptors; and the variations of geographic descriptors for place name, city size, and SMSA codes. Other information required detailed coding which presented keypunching problems. Studies of the input specifications indicated that many of these units could be generated by computer. The same data entry resources could yield a higher rate of data entry through the reduction of the number of keystrokes per document reference.

Since at various points the input may take the form of a line on a worksheet, a card in a deck, or a tape record, the term "unit" is used to cover all the possibilities. A single unit can be a descriptor, a subdescriptor or a line of descriptive cataloging.

In the design of the Pre-edit Module, the programs were instructed to check the input for the codes indicating when to expand input units or create extra units. At the completion of the Pre-edit Module, these computer-generated units go to the File Maintenance Module along with the original input from the worksheet.

Task #2: To edit the Document Input for sequence, format and coding errors to ensure that the coding requirements have been met. Before the Pre-edit Module evolved, the only error detection was that done by the CFS File Maintenance Module; however, these were by-products from updating the Document Master and Inverted Files. If the editing was delayed until file maintenance, most of the input had already been added to the files and correction of errors became not correction of the input but revisions of the Document Master File.

The major reason for the development of the Pre-edit Module was the need to detect and correct errors prior to file maintenance. It is significantly easier to correct the input rather than change the files. The rate of undetected errors was approximately three to five percent, acceptable within data processing standards. After the creation of the Pre-edit Module, the rate of undected errors dropped to one-half to one percent. Some of the errors previously undetected were an invalid element code for bibliographic information or a document reference with a missing author, title or subject heading.

The Pre-edit Listing is the product that relieves the document analyst of the burden of checking the input for coding, sequence, and format errors. Such conditions

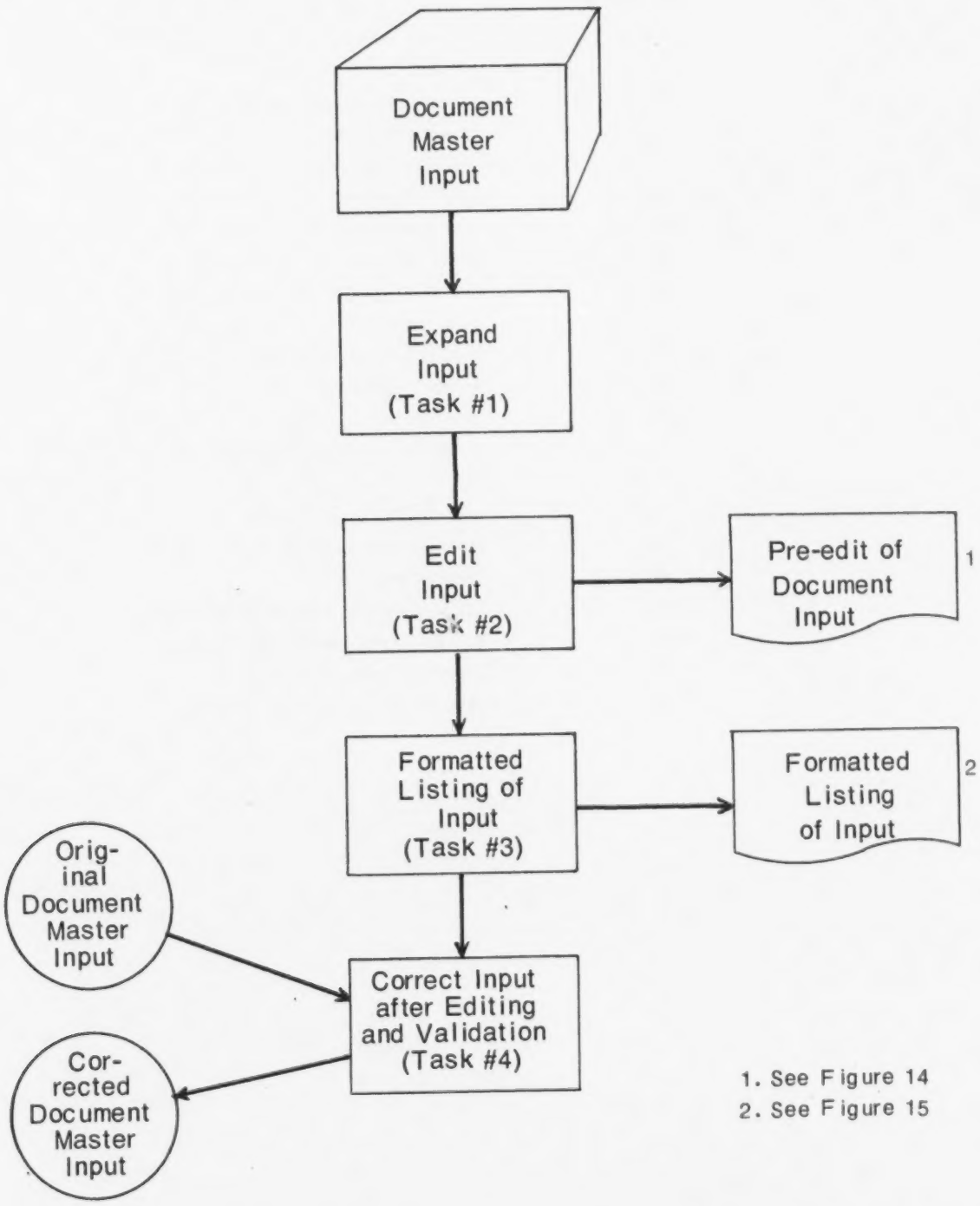
can be consistently monitored by the system. The Pre-edit Listing of the Document Input (see Figure 14) indicates to the editor both the unit in error and the cause of the error.

Task #3: To produce a Formatted Listing of the Document Input for proofreading and error correction purposes. The Formatted Listing, a second product of the module, is really a comprehensive listing of the complete Document Input. The listing is organized by document number and within document by unit number. The various elements of data (such as document number, unit number, coding, and text of each unit) are easily identified. The format of the listing may be varied through the selection of various options but generally the standard format, illustrated in Figure 15, is chosen.

It is the Formatted Listing that the document analyst uses for proofreading and reviewing the bibliographic elements of input, checking for spelling and consistency in human editing and validation. The analyst also uses sample copies of the index sections (e.g. Personal Name Index, Consultant Index, etc.) for those bibliographic elements included in the *Input Index* as an additional tool for editing and validation. All errors and their corrections are noted on the Formatted Listing which becomes the master copy for error correction. This listing was chosen because of its format, ease of usage and comprehensiveness. (See *Operations Manual* for Editing and Validation.)

Task #4: To update the Document Input with the corrections and revisions detected during the earlier pre-edit processing. When the Pre-edit Module was first developed, the input was handled at least twice. The first time, the original input was processed to detect all the errors. The remainder of the time the card input was updated with the corrections and revisions. Since this became an operational burden, the first addition to the Pre-edit Module was the modification of the input devices to use tape input. The original input is now stored on magnetic tape and updated with the corrections from proofreading, editing, and computer checks. The original input and the revisions are handled only once.

PRE-EDIT MODULE: GENERAL LOGIC OF COMPUTER PROCESSING



1. See Figure 14
2. See Figure 15

Figure 13

PRE-EDIT LISTING OF THE DOCUMENT INPUT

PRE-EDIT LISTING OF THE DOCUMENT INPUT AS OF 12/31/69

ERROR CODE	ERROR REASON
01	NO MAIN AUTHOR
02	NO TITLE
03	NO IMPRINT AND COLLATION
04	NO SUBJECT HEADING
05	DOCUMENT NUMBER OUT OF SEQUENCE
06	FIRST RECORD NOT TYPE 1
07	UNIT NUMBER OUT OF SEQUENCE
08	ENTRY NOT A OR D
09	RECORD TYPE NOT 1,2,3, OR 5
10	MORE THAN ONE TYPE 1 RECORD
11	UNIT NUMBER GREATER THAN 1000
12	ELEMENT NUMBER NOT BLANK
13	PRE CODE NOT * = OR -
14	SUBDESCRIPTOR LONGER THAN 12 CHAR
15	COLUMN 24 NOT --
16	LAST CHARACTER NOT . * OR /
17	ELEMENT NUMBER NOT XX
18	PRECODE NOT N
19	1ST 6 CHARCT OF DESCRIP INCORRECT
20	SUBDESCRIPTOR LONGER THAN 12 CHAR
21	INVALID ELEMENT NUMBER
22	UNIT OUT OF SEQUENCE BY ELEMENT

Figure 14

(Continued on next page)

PRE-EDIT LISTING OF THE DOCUMENT INPUT

(Continued from preceding page)

```
PRE-EDIT LISTING OF THE DOCUMENT INPUT AS OF          12/31/69

                                RECORD IN ERROR                                                ERROR CODES

                                                                                               06
                H001                                                                           08 09
                H001                                                                           07 08 09
                H001                                                                           07 08 09
                                                                                               01 02 03 04
AINSTDA68CR     0140A3XXN DATES      ENTRY       S 04196906                                    20
AINSTDA68LE     0140A3XXN DATES      ENTRY       S 04196906                                    20
AINSTDA68SC     0140A3XXN DATES      ENTRY       S 04196906                                    20
ASTANRI69TE     0140A3XXN DATES      ENTRY       S 04196906                                    20
ATAX.F.69FF     0140A3XXN DATES      ENTRY       S 04196906                                    20
ATAX.F.69FF     0610A3XXNTAXATI      MUNICIPAL                                                 19
AWALSAH69UC     0140A3XXN DATES      ENTRY       S 04196906                                    20
BASPOPA69FPES 0140A3XXN DATES        ENTRY       S 04196906                                    20
BNASBO.68SP     0140A3XXN DATES      ENTRY       S 04196904                                    20
BNASBO.69BS     0140A3XXN DATES      ENTRY       S 04196906                                    20
DNATCUP68BA1020350A2   *TURNKEY                                                                15 16
DNATCUP68BA1020530A2   *TURNKEY                                                                07
GPUERPB68PA     0730A2   *REFORMS                                                               07
KCALIFFRA69RP 0140A3XXN DATES        ENTRY       S 04196906                                    20
KNORCAPPB69NA 0140A3XXN DATES        ENTRY       S 04196905                                    20
KNORCAPPB69NA 0182A    *-APEX, N.C.*                                                           09
LINDIMAMP68HUAC0140A3XXN DATES       ENTRY       S 04196905                                    20
LNEWYWEPD69PO 0140A3XXN DATES        ENTRY       S 04196902                                    20
LNEWYWEPD69PO 0155A3XXN DATES        CONTENT       U 041985              L 041950              20
OCONNCC69RH     0180A2   *-CENTRAL CONNECTICUT REGION                                          16
OCONNMR69SH     0180A2   *-MID-STATE CONNECTICUT REGION                                        16
OCONNSR69RR     0180A2   *-SOUTHEASTERN CONNECTICUT REGION                                     16
ODCMWCG69RD     0180A2   *-WASHINGTON, D.C. METROPOLITAN REGION                                16
ONEWYMR69AR     0140A3XXN DATES      ENTRY       S 041969                                      20
ONEWYMR69CS     0180A2   *-NEW YORK METROPOLITAN REGION                                        16
PNEWYMP69DP     0140A3XXN DATES      ENTRY       S 04196906                                    20
YHORV-A69..HB 0140A3XXN DATES        ENTRY       S 04196906                                    20
YONHO-A69..SH 3014A521ONHO-A. 14-7-8. MAR.69.                                                  22
YTHNK-A69WHEN                                                                                  06
YTHNK-A69WHEN                                                                                  01 02 03 04
```

Figure 14

FORMATTED LISTING OF THE DOCUMENT INPUT

```
                                        FORMATTED LISTING OF TAPE/CARD CFS INPUT
      X---DOC-NO---X  UNIT  XX  XX  X---------------DESCRIPTOR/PRINT IMAGE-----------------X
      AMEYEHG68HA     0590  A2      *URBAN ENVIRONMENT
      AMEYEHG68HA     0610  A2      *URBAN DESIGN
      AMEYEHG68HA     0630  A2      *PHOTOGRAPHS
      AMEYEHG68HA     1010  A5  01  MEYER-HEINE, GEORGES
      AMEYEHG68HA     1020  A5  08  INTERNATIONAL FEDERATION FOR HOUSING AND PLANNING
      AMEYEHG68HA     1040  A5  08  CENTRE DE RECHERCHE D URBANISME, PARIS
      AMEYEHG68HA     2040  A5  11  HUMAN APPROACH TO URBAN PLANNING
      AMEYEHG68HA     3010  A5  21  CENTRE DE RECHERCHE D URBANISME, PARIS. 1968. 183P.
      AMEYEHG68HA     9010  A5  99  6AURBAN PLANNING
      AMEYEHG68HA     9020  A5  99  6BURBAN ENVIRONMENT
      AMEYEHG68HA     9030  A5  99  6CURBAN DESIGN
***   ARUTHH.69TN     0010  A1      ENTRY 07/69                                          ***
      ARUTHH.69TN     0030  A2      -=ARUTHH.69TN
      ARUTHH.69TN     0070  A2      =ARTICLES
      ARUTHH.69TN     0135  A2      =DATES                                PUBLICATION S 041969
      ARUTHH.69TN     0140  A3  XX  N DATES     ENTRY       S 04196906
      ARUTHH.69TN     0530  A2      *URBANIZATION                         FORECASTS
      ARUTHH.69TN     0550  A2      *LEGISLATION                          FEDERAL
      ARUTHH.69TN     0560  A3  XX  N LEGISL    STATE
      ARUTHH.69TN     0570  A3  XX  N LEGISL    MUNICIPAL
      ARUTHH.69TN     0590  A2      *REGIONAL PLANNING
      ARUTHH.69TN     0610  A2      *FORECASTING
      ARUTHH.69TN     0630  A2      *LAND RESOURCES
      ARUTHH.69TN     0650  A2      *ALTERNATIVES
      ARUTHH.69TN     0670  A2      *NEW TOWNS
      ARUTHH.69TN     0690  A2      *TAX INCENTIVES
      ARUTHH.69TN     0710  A2      *METROPOLITAN AREAS                   EXPERIMENTAL
      ARUTHH.69TN     1010  A5  01  RUTH, HERMAN
      ARUTHH.69TN     2040  A5  11  TOWARD A NATIONAL POLICY FOR URBAN LAND DEVELOPMENT
      ARUTHH.69TN     3010  A5  21  JAN., 1969. 19P. PAPER PRESENTED AT THE NATIONAL
      ARUTHH.69TN     3020  A5  21     ASSOCIATION OF COUNTIES, LAND USE CONFERENCE
      ARUTHH.69TN     9010  A5  99  6AURBANIZATION
      ARUTHH.69TN     9020  A5  99  6BLAND RESOURCES
      ARUTHH.69TN     9030  A5  99  6CMETROPOLITAN AREAS
***   ASTANRI69TE     0010  A1      ENTRY 06/69                                          ***
      ASTANRI69TE     0030  A2      -=ASTANRI69TE
      ASTANRI69TE     0100  A2      *MASS TRANSP DEMO REPORT
      ASTANRI69TE     0135  A2      =DATES                                PUBLICATION S 041969
      ASTANRI69TE     0140  A3  XX  N DATES     ENTRY       S 04196906
      ASTANRI69TE     0170  A2      =GEO
      ASTANRI69TE     0180  A2      *-C/
      ASTANRI69TE     0530  A2      *EMPLOYMENT
      ASTANRI69TE     0550  A2      *UNDERPRIVILEGED
      ASTANRI69TE     0570  A2      *MINORITY GROUPS
      ASTANRI69TE     0590  A2      *JOURNEY TO WORK
```

Figure 15

Pre-Edit Module: Program Inventory

Task #	Function	COBOL Program	Processing Cycles
1	Format Document Input or Document Revisions	E0010	Editing and Validation, Input Processing
2	Expand Document Input	E0020	Editing and Validation, Input Processing
3	Edit Document Input	E0030	Editing and Validation, Input Processing
4	Print the Formatted Listing	E0020	Editing and Validation, Input Processing
5	Update the Document Input	E0040	Editing and Validation, Input Processing

File Maintenance Module

Function

The core of an information retrieval system is the File Maintenance Module, the series of programs that accept and process the data to build files capable of being searched by computer. The umbrella of "building files capable of being searched by computer" covers many possible transactions. One may add or delete bibliographic records in the Document Master File. It may be necessary to revise the contents of a bibliographic record – either to correct an error or to reflect new policies of content and descriptive analysis. The File Maintenance Module can handle all of these possible transactions.

The major function of the File Maintenance Module is to update the Document Master File – to add the new bibliographic references. Approximately ninety percent of the bibliographic transactions are the addition of new references to the file. The remaining transactions consist of revising the contents of the existing Document Master File.

As discussed in the Thesaurus Module, when attempting to extract only those records referencing the problem at hand from a large file, it is extremely important to maintain a strict control over the indexing vocabulary. This is a fundamental design principle for an information system. However, equally fundamental is the principle of maintaining file integrity. The manipulation of data included in several files makes control of the file content extremely difficult. For example, an item may be misfiled in one or multiple files; changes may be made in one file that are unreflected in other files or parts of files. Errors such as these are difficult to detect and correct because of the size and multiplicity of files.

Primarily, the File Maintenance Module accepts the Document Input, validates the indexing terminology against the Thesaurus File, updates the Document Master File, and the auxiliary files for searching and creates the input to the Publications Module. Invalid descriptors are not processed but instead called to the editor's attention through a listing of the error units and a correction legend. The detection of such errors does not cause the entire document to be rejected. The valid portion of the record is accepted; the errors are reprocessed in the next correction cycle of the Document Master File.

In proportion to the efforts expended elsewhere, URBANDOC's contributions to the File Maintenance Module were minimal. However, several functions were added. The ability to analyze the usage of the bibliographic elements was one of these improvements. More significant was the expansion to create subsets of the Document Master File by means of the document classification notation. This is useful for special distributions, retrieval, or publications.

Since the File Maintenance Module's prime responsibility is the creation and maintenance of the searchable files, the type of report is different from those of the other modules. The reports produced here are fewer in number and more in the nature of manual tools providing hard-copy access to machine-readable files. Specifically, the File Maintenance Module produces the File Maintenance Listing, the Library Print, the Main Document Listing of the Document Master File, and the Summary and Detail Listings of the Inverted File. A discussion on the management and retention of these reports is covered in Chapter XI of the *Operations Manual.*

Tasks

Task #1: To format the Document Input into the files required for further processing, including the validation of the content analysis.

Task #2: To validate the indexing terms and the subject headings in the input against the Thesaurus for authorized use and the substitution of geographic coding for place names and preferred terms for synonyms.

Task #3: To check the input for internal consistency and remove error units from the file for such conditions as improper coding, incorrect association of descriptors and subdescriptors, etc.

Task #4: To update the Document Master File with the additions, deletions, and revisions indicated in the input while checking for such conditions as attempting to create an excessively long record or duplicating a document number.

Task #5: To analyze the bibliographic contents of the new Document Master File by element. Both the File Maintenance Listing and the Library Print reports provide counts by document – the total number of references in the system and the number of references that have been added, deleted, or revised in any one cycle. URBANDOC felt that it would have been helpful to have a statistical analysis by corporate author, literature citation, etc. It is these, and other counts, that are provided by a second statistical analysis. In addition, there is a preceding section that flags for the editor any document reference containing an obsolete bibliographic element. This section is of assistance in correcting the file. The format of this report is illustrated in Figure 18.

Task #6: To print contents of the Document Master File or the active sections of the File. The Library Print is designed to eliminate the use of several File Maintenance Listings (see below) by providing a hard-copy display of the entire Document Master File.

It is usually not desirable to reprint the entire file after the first file maintenance cycle. Continual file growth means a continual increase in the amount of printing – with the additional disadvantage of an ever-decreasing ratio of new and revised materials in the total file. Furthermore, analysis has shown that during any one update cycle, all the activities might possibly be confined to only twenty percent of the document classification categories.

With URBANDOC's ability to subset the Document Master File, it is possible to create a temporary file of the more active sections of an update. With the Library Print, updated sections, rather than an entirely new listing, can be created.

While the contents of the Library Print are straightforward, the listing can be confusing since content and descriptive analyses are intermingled with systems coding. The Document Master Library Print is illustrated in Figure 17.

The Main Document Listing is a more suitable tool for browsing through the Document Master File. This listing, created for internal use and as a publishable subset in the *Input Index,* is a compact and straightforward presentation of only the bibliographic portion of the document reference. This report is formatted for the Publications Module where it is discussed in detail.

Task #7: To print a listing of the transactions updating the Document Master File and to create the input to the Inverted File. The File Maintenance Listing of the updates is by cycle. Each file update produces a listing of the transactions for that cycle. Since its primary function is to provide a history of the update, the File Maintenance Listing may be considered another part of the printed backup to the file. It loses its effectiveness as a manual tool since it accesses the file by the individual update cycles. Since it cannot provide the analyst with the contents of the entire file, several issues of the listing must be coordinated.

Task #8: To update the Inverted File with the active terms, posting the document numbers and updating the frequency count and the date of last activity.

During file maintenance, different transactions could occur: the addition of a new document reference or the deletion or revision of an existing reference. Since the Inverted File is a variation of the presentation of the descriptors used during document analysis, any change to the Document Master File affects the Inverted File. The transactions just described could cause the addition of a new descriptor to the Inverted File, the addition of a document number posting to a descriptor already on the Inverted File, or the deletion of a document number posting from a descriptor on the Inverted File. (If all the document number postings were removed for one descriptor, Task #8 makes the appropriate changes in the postings of both the descriptors and the document numbers to ensure agreement between the Inverted File and the Document Master File. These changes are most readily apparent in the Inverted File Summary Listing. See Figure 19.)

Task #9: To print the contents of the Inverted File, both in summary and in detail. The contents of the Inverted File are extremely important when searching either manually or by computer. For searching, the Inverted File can indicate to the analyst which terms have been used and which will yield best results at search time. A term's frequency of usage will indicate to the analyst whether to narrow or broaden a search question. A listing of the relevant document numbers for a descriptor will indicate the sections of the file most concerned with a particular concept. All of this information is conveyed to the analyst through the Summary and Detail Listings. Each listing exclusively handles a portion of this information. While on most occasions it is possible to work with one of the listings, it may sometimes be necessary to coordinate the two.

The Summary Listing provides the reader with an overall perspective of the descriptors. The contents of this report includes the type of descriptor, frequency, and last date of usage. The Detail Listing provides the reader with an itemization of the references for any one term. This tool becomes especially significant for use in manual searching. In many respects, it is similar to a subject index only with a much greater depth of indexing. (In many information systems, a similar printout is often marketed under the name of a dual dictionary.) The Summary Listing is illustrated in Figure 19, the Detail Listing in Figure 20.

Document Master File Description

The Document Master File consists of the bibliographic records containing the content and descriptive analyses of the documents. This file is known in the CFS system as the "Master File". In the URBANDOC system, each reference to a "record" of the Document Master File means the set of individual tape records containing the bibliographic information (the content and descriptive analyses) for a document.

The Document Master File is maintained on magnetic tape. Records are stored on the file in sequence by document number (or identification number). There is no limit to the number of records that can be included in the system since the file can be extended to a multiple number of reels. (See Figure 21.)

Each individual record contains Program Utility, Searchable, and Free Text Information sections in that sequence. The Program Utility Section is used by the programs to facilitate processing.

The Searchable Section includes the descriptors and subdescriptors used in the content analysis of a document. There are restrictions placed on the amount of data that may be included as content analysis: (1) a maximum of ninety-nine descriptors may be used for one document, and (2) there is a limitation on the total number of characters allowed; however, this has not been a problem for the URBANDOC system. The Searchable Section may not exceed 2200 characters. (For a detailed discussion, refer to the *Operations Manual* and CFS documentation.)

The File Maintenance Module places restrictions on a descriptor in addition to those specified in the Thesaurus File. Although an entry in the Thesaurus can be as large as

FILE MAINTENANCE MODULE: GENERAL LOGIC OF COMPUTER PROCESSING

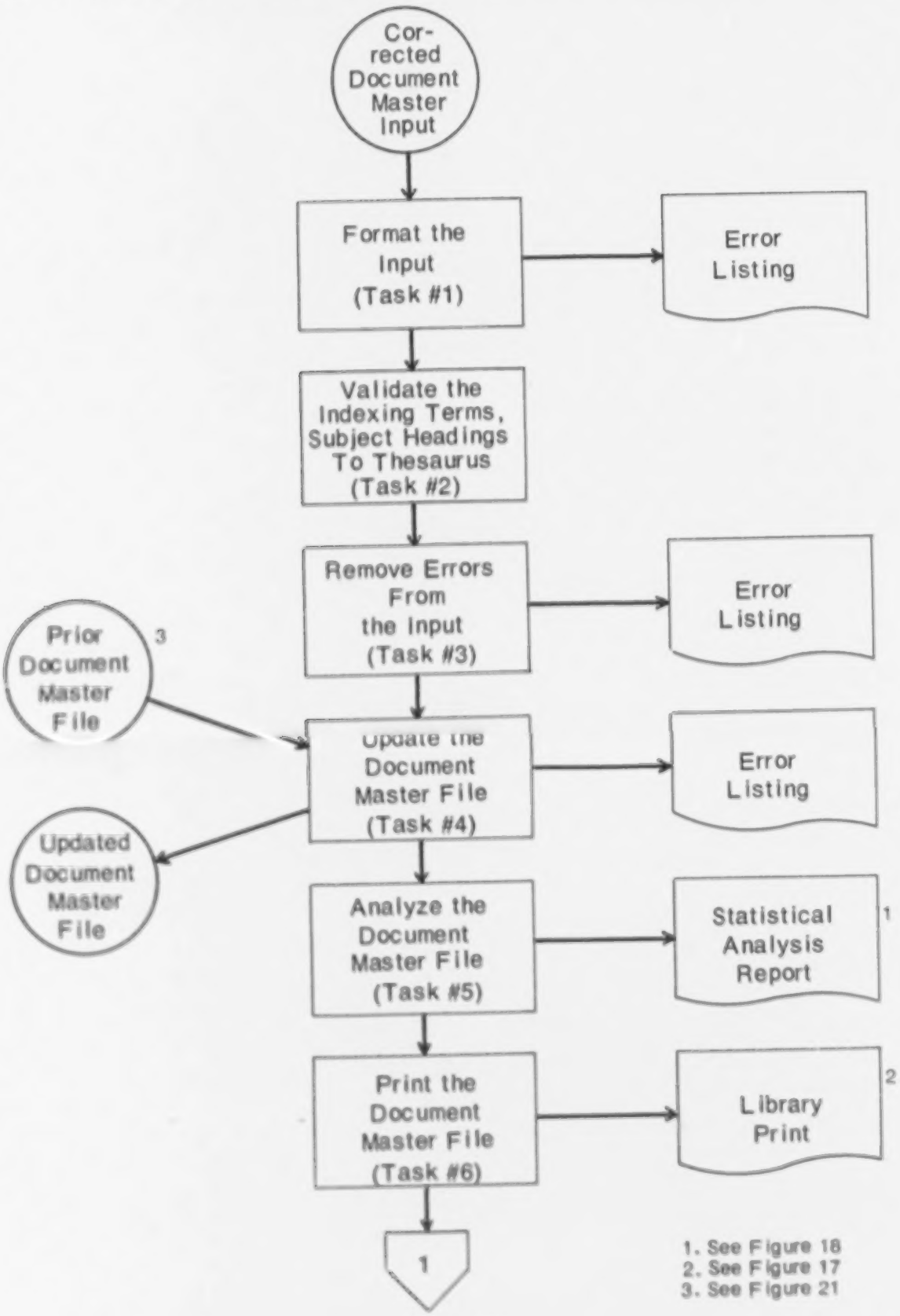
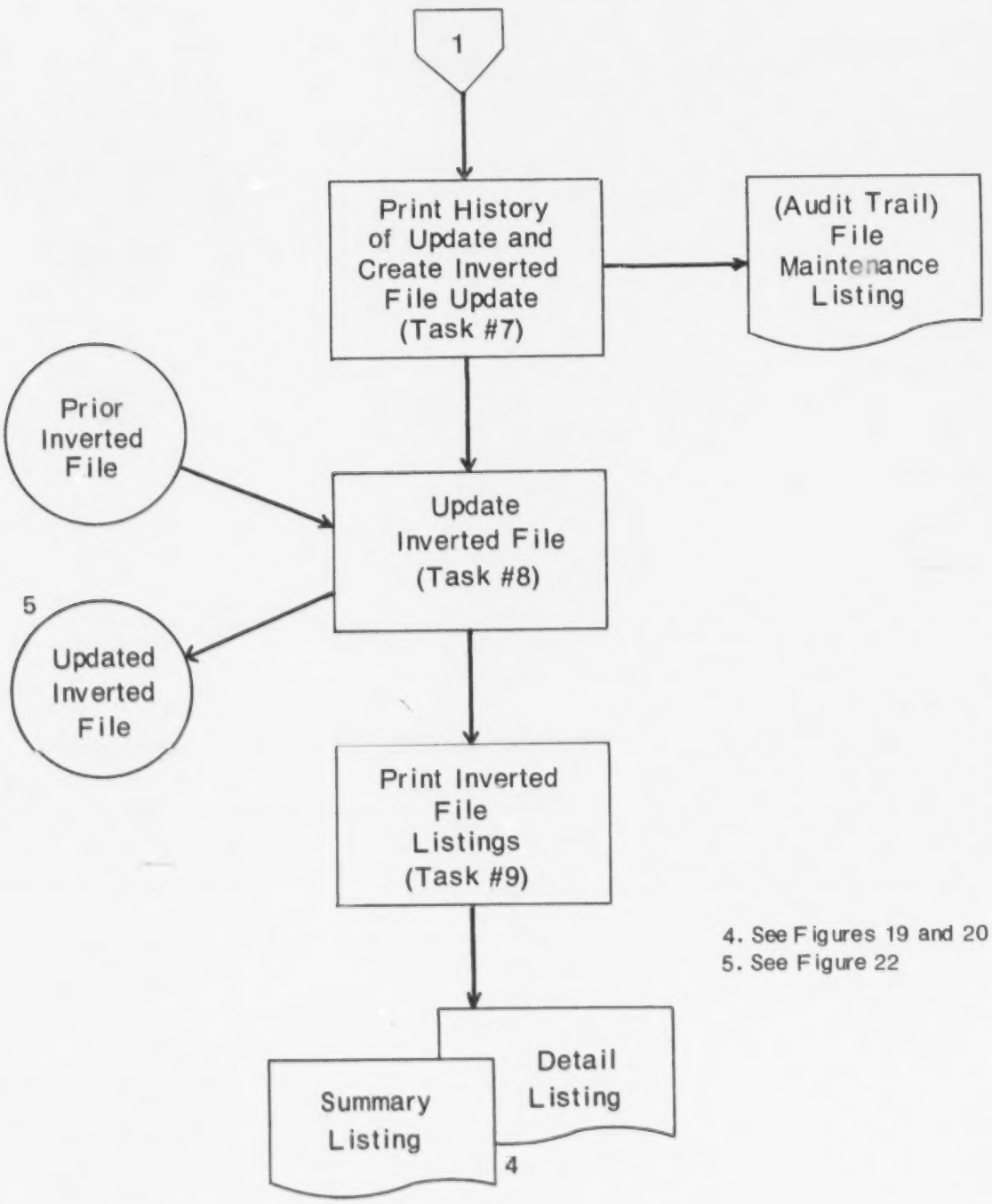


Figure 16

(Continued on next page)

FILE MAINTENANCE MODULE: GENERAL LOGIC OF COMPUTER PROCESSING

(Continued from preceding page)



4. See Figures 19 and 20
5. See Figure 22

Figure 16 (Cont.)

DOCUMENT MASTER LIBRARY PRINT

MASTER FILE AS OF 09/23/69

DOCUMENT-MASTERS LIBRARY PRINT...

```
 DOCUMENT NO.  RECORD IDENTIFICATION


 ABARKRF68AU     ENTRY 02/69                                    SEGMENT NO.000
RANK001 - =ABARKRF68AU /000/RANK002 = ARTICLES /000/RANK003 = DATES /002/QUAL 001 PUBLICATION   S   04.196800 /
QUAL 002 ENTRY   S   04.196803 /RANK004 = URBAN AFFAIRS /000/RANK005 = URBAN DEVELOPMENT /000/
RANK006 = PRIVATE SECTOR /000

 ABARKRF68AU     ENTRY 02/69                                    SEGMENT NO.001
  BARKER, ROBINSON F.$

 ABARKRF68AU     ENTRY 02/69                                    SEGMENT NO.006
  NATIONAL INDUSTRIAL CONFERENCE BOARD$
  ALLEGHENY HOUSING REHABLITATION CORP., PITTSBURGH$

 ABARKRF68AU     ENTRY 02/69                                    SEGMENT NO.011
  AMERICAS URBAN DILEMMA - INDUSTRYS RESPONSE TO THE$
     CHALLENGE$

 ABARKRF68AU     ENTRY 02/69                                    SEGMENT NO.099
  6APRIVATE SECTOR$

 ABURBRJ68PP     ENTRY 04/69                                    SEGMENT NO.000
RANK001 - =ABURBRJ68PP /000/RANK002 = DISSERTATIONS /000/RANK003 = DATES /002/QUAL 001 PUBLICATION   S   04.196800 /
QUAL 002 ENTRY   S   04.196902 /RANK004 = MUNICIPAL GOVERNMENT /000/RANK005 = MODELS /000/RANK006 = RESEARCH DESIGN /000/
RANK007 = POLITICS /000/RANK008 = URBAN PLANNING /000/RANK009 = URBANIZATION /000

 ABURBRJ68PP     ENTRY 04/69                                    SEGMENT NO.001
  BURBY, RAYMOND J., III$

 ABURBRJ68PP     ENTRY 04/69                                    SEGMENT NO.011
  POLITICS AND PLANNING, TOWARD A MODEL OF PLANNING-RELATED$
     POLICY OUTPUTS IN AMERICAN LOCAL GOVERNMENT$

 ABURBRJ68PP     ENTRY 04/69                                    SEGMENT NO.021
  CHAPEL HILL, N.C., 1968. 347P.$

 ABURBRJ68PP     ENTRY 04/69                                    SEGMENT NO.099
  6AMUNICIPAL GOVERNMENT$
  68POLITICS$
  6CURBAN PLANNING$

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.000
RANK001 - =ACENTSD68US /000/RANK002 = ARTICLES /000/RANK003 = DATES /002/QUAL 001 PUBLICATION   S   04.196800 /
QUAL 002 ENTRY   S   04.196811 /RANK004 = NEW TOWNS /000/RANK005 = GHETTOS /000/RANK006 = HOUSING STOCK /000/
RANK007 = POPULATION PROJECTIONS /000/RANK008 = NEGROES /000/RANK009 = FEDERAL AID /000/RANK010 = JOBS /000

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.002
  CENTER FOR THE STUDY OF DEMOCRATIC INSTITUTIONS$

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.005
  WEISSBOURD, BERNARD$
  CHANNICK, HERBERT$

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.011
  URBAN STRATEGY$

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.021
  SANTA BARBARA, CALIF., 1968. 13P. REPRINT. ARTICLE ORIG-$
     INALLY IN THE CENTER MAGAZINE, V1. NO. 6. 09-68.$

 ACENTSD68US     ENTRY 02/69                                    SEGMENT NO.099
  6ANEW TOWNS$
  68GHETTOS$
  6CHOUSING STOCK$

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.000
RANK001 - =ACONSF.67HB /000/RANK002 = SPECIAL REPORTS /000/RANK003 = DATES /002/QUAL 001 PUBLICATION   S   04.196700 /
QUAL 002 ENTRY   S   04.196802 /RANK004 = ROADSIDES /000/RANK005 = SIGNS, BILLBOARDS /001/QUAL 001 CONTROLS     /
RANK006 = BEAUTIFICATION /000/RANK007 = LEGISLATION /001/QUAL 001 FEDERAL     /RANK008 = COMPENSATION /000/
RANK009 = STANDARDS INFORMATION /000

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.002
  CONSERVATION FOUNDATION$

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.008
  PUBLIC ROADS BUREAU$

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.011
  HIGHWAY BEAUTIFICATION REPORT$

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.021
  WASHINGTON, D.C., 1967. 6P.$

 ACONSF.67HB     ENTRY 02/69                                    SEGMENT NO.031
  HIGHWAY BEAUTIFICATION ACT OF 1965. U.S.$
```

Figure 17

STATISTICAL ANALYSIS REPORT

(As of 12/31/69)

CONTENT ANALYSIS OF BIBLIOGRAPHIC FILE AS OF 12/31/69

1780	DOCUMENT ON TAPE
715	DOCUMENTS WITH PERSONAL AUTHORS
974	DOCUMENTS WITH CORPORATE AUTHORS
88	ANONYMOUS DOCUMENTS--UNSIGNED ARTICLES
10	ACRONYM ENTRIES
392	DOCUMENTS WITH JOINT PERSONAL AUTHORS
291	DOCUMENTS WITH JOINT CORPORATE AUTHORS
185	DOCUMENTS WITH ASSOCIATED CONSULTANTS
142	DOCUMENTS WITH ADDED PROPER NAMES
45	DOCUMENTS WITH ADDED PERSONAL AUTHORS
1689	DOCUMENTS WITH SIGNIFICANT TITLES
29	DOCUMENTS THAT ARE PART OF A SERIES
87	DOCUMENTS WITH A MEANINGLESS TITLE
1768	DOCUMENTS WITH IMPRINT-COLLATION DATA
195	DOCUMENTS WITH ABSTRACT, NOTES, OR NOC
55	DOCUMENTS REFERENCING LEGAL MATERIALS
	DOCUMENTS CLASSED AS BOOK REVIEWS
16	DOCUMENTS REFERENCING OTHER LITERATURE
	DOCUMENTS CONTAINING BOOK REVIEWS
55	DOCUMENTS WITH ACQUISITION INFORMATION
	DOCUMENTS WITH ASSOCIATED SPONSOR, FOUNDATIONS
1779	DOCUMENTS WITH SUBJECT HEADINGS

Figure 18

INVERTED FILE SUMMARY LISTING

DESCRIPTOR FILE--SUMMARY LISTING

DATE - 09/23/69

DESCRIPTOR	TYPE	COUNT	LAST ADD	LAST DEL
APPRAISAL	*PRECISE	9	03/24/69	
APPROPRIATIONS	*PRECISE	2	03/24/69	
ARCADES	*PRECISE	2	03/24/69	
ARCHITECTS	*PRECISE	6	03/24/69	
ARCHITECTURAL CONTROLS	*PRECISE	5	04/08/69	
ARCHITECTURAL DESIGN	*PRECISE	14	04/08/69	
ARCHITECTURAL DRAWINGS	*PRECISE	4	08/18/69	
ARCHITECTURAL FEATURES	*PRECISE	9	09/23/69	
ARCHITECTURE	*PRECISE	6	04/08/69	
ARENAS, STADIA	*PRECISE	2	02/04/69	
ART	*PRECISE	1	02/04/69	
ARTICLES	=COMMON	761	09/23/69	09/23/69
ARTISTS QUARTERS	*PRECISE	1	08/18/69	
ASSEMBLY PLACES	*PRECISE	2	04/08/69	
ASSESSMENT	*PRECISE	9	08/18/69	
ASSOCIATIONS	*PRECISE	1	04/08/69	
ATTACHED HOUSES	*PRECISE	1	03/24/69	
AUTHORITIES	*PRECISE	10	08/18/69	
AUTOMOBILES	*PRECISE	4	03/24/69	
AWARDS, COMPETITIONS	*PRECISE	3	08/18/69	
BANKS, BANKING	*PRECISE	3	03/24/69	
BASE MAPS	*PRECISE	1	03/24/69	
BATHROOMS	*PRECISE	3	03/24/69	
BEAUTIFICATION	*PRECISE	14	08/18/69	
BEHAVIORAL SCIENCES	*PRECISE	1	03/24/69	
BENEFITS	*PRECISE	2	02/04/69	
BIBLIOGRAPHY	*PRECISE	87	09/23/69	09/23/69
BICYCLING	*PRECISE	1	09/23/69	
BIDS, BIDDING	*PRECISE	2	03/24/69	
BIOGRAPHY	*PRECISE	4	08/18/69	
BIOLOGICAL SCIENCES	*PRECISE	1	03/24/69	
BLIGHT	*PRECISE	20	08/18/69	
BLOCKS	*PRECISE	6	03/24/69	
BOND ISSUES	*PRECISE	2	08/18/69	
BONDS	*PRECISE	5	04/08/69	
BOTANICAL FEATURES	*PRECISE	4	03/24/69	
BOUNDARIES	*PRECISE	7	04/08/69	
BRICK CONSTRUCTION	*PRECISE	1	03/24/69	
BRIDGES	*PRECISE	2	03/24/69	
BROCHURES	*PRECISE	32	08/18/69	

Figure 19

INVERTED FILE DETAIL LISTING

DESCRIPTOR FILE DETAIL LISTING — FILE CREATED - 09/23/69

DESCRIPTOR - AWARDS, COMPETITIONS — TYPE - PRECISE
ADOWNSS69..UBB DHUD...68DE YJOHO-A68..FP

DESCRIPTOR - BANKS, BANKING — TYPE - PRECISE
BJSBSLC68UF DNATCUP68HB117 YCITY-A68CLRH

DESCRIPTOR - BASE MAPS — TYPE - PRECISE
GNORCCD68CM

DESCRIPTOR - BATHROOMS — TYPE - PRECISE
DNATCUP68HL112 KGEORMAPZ68EL YACUF-A68..BO

DESCRIPTOR - BEAUTIFICATION — TYPE - PRECISE
ACONSF.67HB ADOWNSS69..UBB BASPOPA68BCTC EBANKCH68BL KCALIFRPC68CD KNEWJWOPD68DA KNEWJWOPD68PE KSOUCSPPD68CA
LCALISDPD67PO OFLOREC68DA OSANFBA68LP OTULSMA68UB YLSAR-A68MCNB YNACI-B68KWGG

DESCRIPTOR - BEHAVIORAL SCIENCES — TYPE - PRECISE
BCOPLEB68CMER

DESCRIPTOR - BENEFITS — TYPE - PRECISE
DRAA.LP67..401 DRAA.LP67..431

DESCRIPTOR - BIBLIOGRAPHY — TYPE - PRECISE
ACUELB.68B. ACUELB.68CA ACUELB.68D. ACUELB.68UU AIBM.DP68SC104 AIBM.DP68SC105 AIBM.DP68SC107 AKALURA68PR
AKRAEKL68EI ALEVIMR69CR ATAX.F.67ST BASPOPA68MMPA BASPOPA69MRCH BCOPLEB68BDSP BCOPLEB68BLRU BCOPLEB68BMPC
BCOPLEB68CMER BCOPLEB68CRDB BCOPLEB68GACA BCOPLEB68GGCR BCOPLEB68GGNR BCOPLEB68GGRP BCOPLEB68BGWPL BCOPLEB68HMPP
BCOPLEB68HWCO BCOPLEB68HWGA BCOPLEB68KKIP BCOPLEB68KKSA BCOPLEB68LDMR BCOPLEB68MGMC BCOPLEB68MJAL BCOPLEB68PLPD
BCOPLEB68SCCG BCOPLEB68SCMO BCOPLEB68SCRP BCOPLEB68TDCI BCOPLEB68UNJW BCOPLEB68WWHR BCOPLEB69BWCP BCOPLEB69CSAC
BCOPLEB69FJIR BCOPLEB69LJCP BCOPLEB69RJAA BCOPLEB69VLSP BNATIUC68AP BTRC...68LR BURISA.68UR110 CCINNIU67RR
CHARVPT69SI104 CMICHWS67MG CNORCUR68OA CNORCUR68PA DACIR..69AR DHUD.L.67BW DHUD.L.67HM DOUTDR868IS
DOUTDR869IS DPUBLHS68UP GALASSH68MC GALASSH68TC GNEWYPC698A GNORCCD68CM GNORCCD68RE GTENNSP68SP
KBOSTRA..67CR KNEWOM...68PP KNEWYMR..68NOB LCALISDPD67CR LCALISDPD67EP LCALISDPD67PO LMICHGEMP68OS OATLAMP69ST
OBALTRP68CB OBALTRP68IA OCONNCA67GO ODCMWCG68SW OKENTLE68AS OCHIOMV68CO OTENNMC68SP QCOUNSG68IP
TUKPWBR69B. VCANACU68AR YAIPJ-A69MLNB YPBAR-B68CJGS YPBAR-B69GBSB YSPLB-A68SCIP YTRAQ-A68DTNT

DESCRIPTOR - BICYCLING — TYPE - PRECISE
ADOWNIE68ALBT

DESCRIPTOR - BIDS, BIDDING — TYPE - PRECISE
APENNEL68PP APENNEL68PR

DESCRIPTOR - BIOGRAPHY — TYPE - PRECISE
YCITY-A69..CS YCITY-A69CLPY YEKIS-A69JTDP YFORT-A68..MS

DESCRIPTOR - BIOLOGICAL SCIENCES — TYPE - PRECISE
YEKIS-A68WHEP

DESCRIPTOR - BLIGHT — TYPE - PRECISE
CCHICUS68IU101 CSOUIPA67RC KCALIHACM68NA KCHICDP..68NW KCHICUR..68MA KGEORMAPZ68EL KGEORWRPC69NA KNEWYHODA68VP
KNORCAPPB69NA KNORCBEPZ68NA KNORCHUPZ68PE KNORCKIPB68NA KSOUCSUPC68NA KTACOCPD.68RS KTENNDAPC68NA LFLORLAPZ68LD
LGEORWWPC68BP LINDIMAMP68HUA LNORCWIPB68LP YJOHO-A68LHNS

DESCRIPTOR - BLOCKS — TYPE - PRECISE
BURISA.68UR114 KALABAUPC68RS KALABFLPC68SR KNEWYMO..68RP OKENTLE68LS YAPIJ-A68WRLU

DESCRIPTOR - BOND ISSUES — TYPE - PRECISE
CCHICUS68IU101 GALASSH68OS

DESCRIPTOR - BONDS — TYPE - PRECISE
BNATIUC68AP DACIR..68LP108 GALASSH68CI GNEWYUD68UD LNORCMAPB68TY

Figure 20

fifty-four characters, when stored in the Document Master File the term is limited to twenty-three characters in addition to the precode. The longer descriptors are truncated to thirty-five characters and the precode during data entry. Once the term has been validated, the longer terms are truncated to the final form of twenty-three characters and the precode. URBANDOC has not been troubled by duplicate terms that might have been created once a descriptor had been truncated to twenty-three characters.

The system makes provision for numerical modifiers. These have not been used by URBANDOC except for date analysis. (For a detailed discussion of the numerical modifier, refer to the CFS documentation.)

The Free Text Section of the bibliographic record is used to organize and store the various elements of data such as main entry, title, imprint, collation, etc. The system allows for differentiation of up to ninety-nine elements of data in this section. Each data element may not exceed 2200 characters. Each element is assigned a segment or "tag" with corresponding number from 01 to 99. Numbers need not be used consecutively; however, the information is presented in sequence by number. The purpose of segmentation is to allow manipulation of the information by type, thus locating the relevant portion of the data. Designation of element use in this section is left to the discretion of the system user. URBANDOC uses are determined by its bibliographic needs with element 99 reserved for subject headings. (See the descriptive analysis portion of this manual for a list of these elements.)

A subject heading is the repetition of one of the descriptors already used in the content analysis. When selected as a subject heading, the document reference will appear in the *Input Index* under this entry. As URBANDOC policy, usually three subject headings are selected, although the system allows many more. Like the descriptors, the CFS system requires that the subject headings be validated against the Thesaurus. (See the Pre-edit Module for an explanation of their creation.)

Since the subject heading is also a descriptor, it has the same character composition as a descriptor. Unlike the descriptor, URBANDOC limits the subject heading to twenty-six characters. The limitation on the size of the subject heading is performed manually. URBANDOC accomplishes this by establishing the authority for the term on the Thesaurus File as being within the size limitation. The subject heading has no precode since it is not directly used during the computer search process.

Inverted File Description

The Inverted File, created by the File Maintenance Module, is a reformatting of the content analysis portion of the Document Master File to provide a reference, by descriptor, of the terms used in the system, the documents in which they serve as descriptors, the frequency of usage and the most recent date of activity. This file is called the Inverted File since it reverses the organization of the information about a document. In the other files, the access is through a document number to the descriptors. In this instance, the access is through a descriptor to the relevant document numbers.

Records are stored on magnetic tape in sequence by descriptor. There is no limit to the number of records that can be included in the file since this too can be a multiple-reel file. (See Figure 22.)

DOCUMENT MASTER FILE RECORD LAYOUT

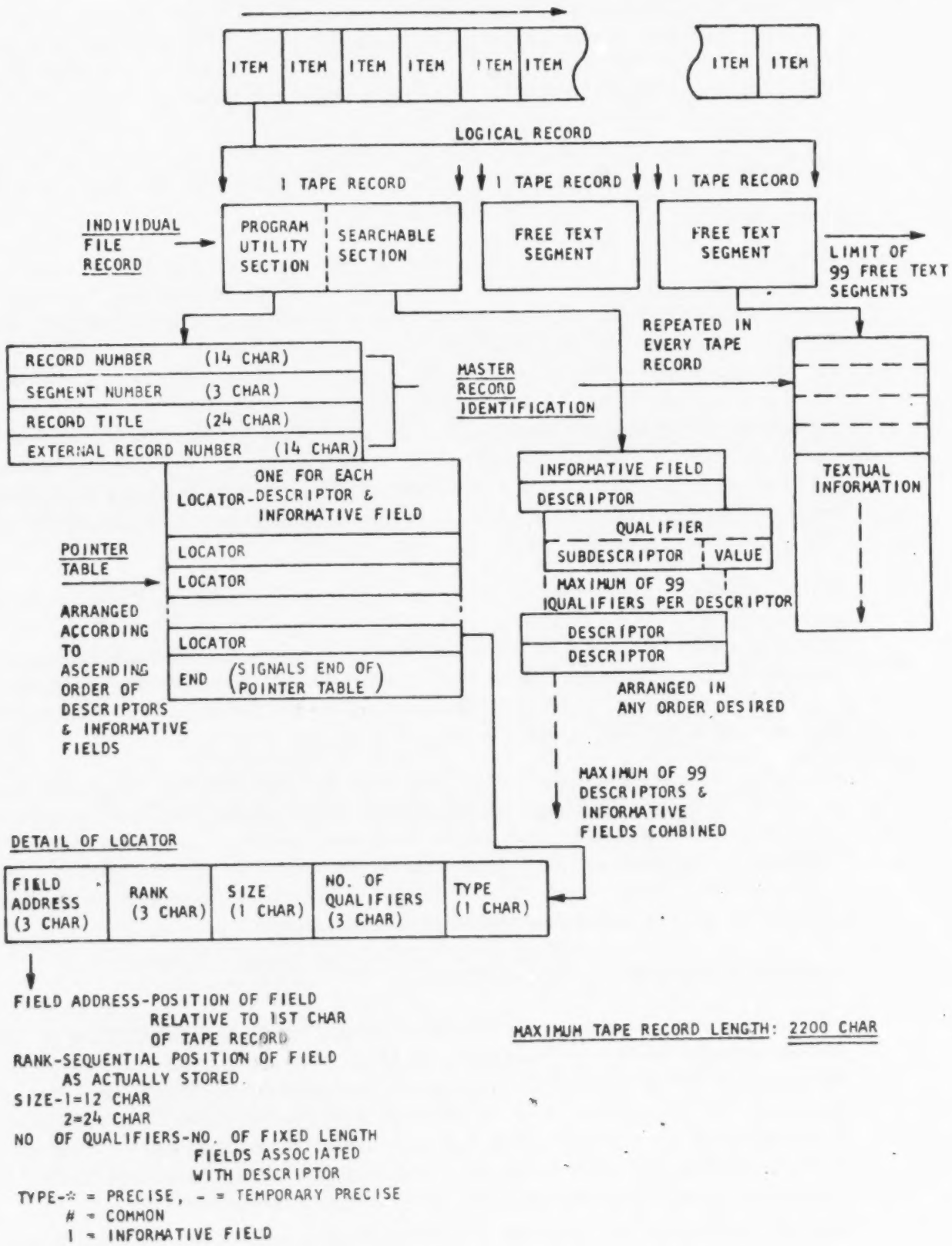


Figure 21

INVERTED FILE RECORD LAYOUT

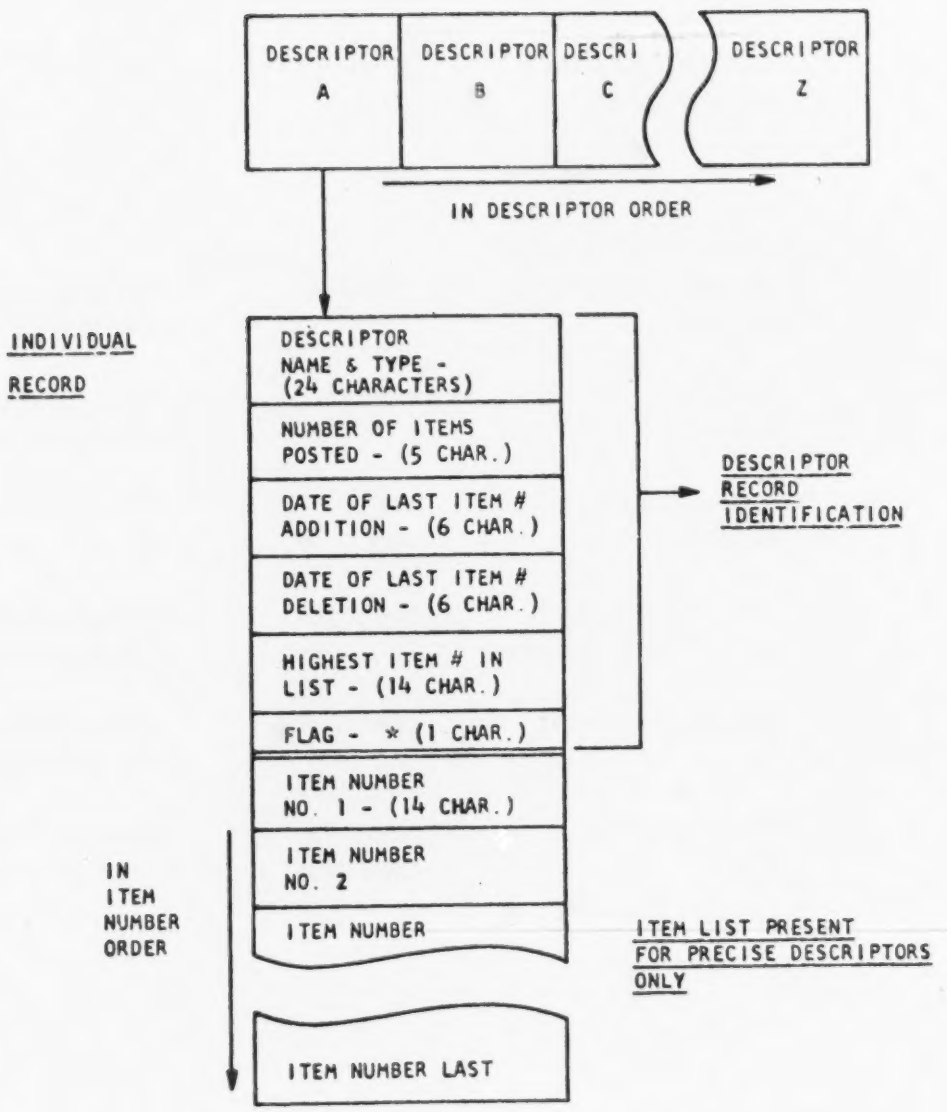

DESCRIPTOR A
DESCRIPTOR B
DESCRI C
DESCRIPTOR Z
IN DESCRIPTOR ORDER
INDIVIDUAL RECORD
DESCRIPTOR NAME & TYPE - (24 CHARACTERS)
NUMBER OF ITEMS POSTED - (5 CHAR.)
DATE OF LAST ITEM # ADDITION - (6 CHAR.)
DATE OF LAST ITEM # DELETION - (6 CHAR.)
HIGHEST ITEM # IN LIST - (14 CHAR.)
FLAG - * (1 CHAR.)
DESCRIPTOR RECORD IDENTIFICATION
ITEM NUMBER NO. 1 - (14 CHAR.)
ITEM NUMBER NO. 2
ITEM NUMBER
ITEM LIST PRESENT FOR PRECISE DESCRIPTORS ONLY
IN ITEM NUMBER ORDER
ITEM NUMBER LAST

Figure 22

File Maintenance Module: Program Inventory

Task #	Function	Autocoder Program	Processing Cycles
1	Format the Document Input	MAINT1	Editing and Validation, Input Processing
2	Validate the Content Analysis Terms	MAINT2	Editing and Validation, Input Processing
3	CFS Edit of Document Input	MAINT3	Editing and Validation, Input Processing
4	Update the Document Master File	MAINT4	*Retrieval Report* File Maintenance
5	Analyze the Document Master File	MAINT8	*Retrieval Report* File Maintenance
6	Print the Document Master File	LIBPRT	*Retrieval Report* File Maintenance
7	Print the Document Master File Transactions	MAINT6	*Retrieval Report* File Maintenance
8	Update the Inverted File	DMAIN1	*Retrieval Report* File Maintenance
9	Print the Inverted File	DMAIN2, DMAIN3	*Retrieval Report* File Maintenance

SYSTEMS MODULES: OUTPUT

Search Module

Function

A computer search in the URBANDOC system is basically a procedure to locate references or documents with certain contents before there is any knowledge of the identity of the documents as to author, title, etc. Each record, as has been pointed out before, contains a content analysis section made up of descriptors. Although the descriptors relate to each other in terms of the analysis of the document, for the purposes of the system each one is independent. A relationship may be established between them at search time; however, such relationships are temporary ones, lasting only for the duration of that search.

The ability to coordinate and combine terms at search is a result of file organization. For retrieval purposes, most files are organized serially. However, an alternate method reverses or inverts the file organization. Each approach is illustrated by Figure 23, a matrix in which the rows represent the references in the system and the columns the descriptors. By examination of the rows, all the pertinent descriptors for a reference may be identified. By examination of the columns, all the references pertaining to a descriptor may be identified. Considering the matrix by the rows is an example of a serial file organization. Considering the matrix by its columns is an example of the inverted file organization method. URBANDOC's Document Master File is a serial file. The Inverted File is an example of the second organizational method.

A serial file search requires an examination of every document in the file unless the requester or analyst can segregate the portion of the file within which the answers are to be found. Even computer speed cannot compensate for the time required to check each item, particularly in an expanding file. A serial search does have certain advantages. The selected references have available all the information for the user to select to any depth or precision. Additionally, the reference may be viewed in perspective since all the descriptors are available.

An inverted file search is organized so that it is not necessary to scan the total file. With the file organized by descriptor, a request can identify the sections of the file to be searched in greater detail. Unfortunately, an inverted file search can only produce a list of the reference numbers meeting the requester's specifications. The flexibility of retrieval output available with a serial file search is lost.

The name of the search system, Combined File Search, is derived from the manner in which it searches the machine-readable systems files. The system actually uses a combination of methods: an inverted file search followed by a serial file search, hence the name.

The choice of such a design procedure was an attempt to combine the advantages of each search method into one system. By first performing the search against the Inverted File, the system locates those references that have some probability of meeting the request

specifications and excluding totally extraneous materials from the file. By following this phase with a serial search of the extracted references, the system can test for more detailed specifications and yet retain all the information for a reference, the flexibility of output, and an overview of the indexing terminology.

Tasks

URBANDOC search procedures involve:

Formulating the search request in terms of the URBANDOC Thesaurus;
Selecting the options for the search output;
Creating machine-readable input for the search requests;
Performing the computer search;
Utilizing the search results.

Of the five steps, selecting the options for search output and creating machine-readable input for the search requests are more appropriately topics for the *Operations Manual*. They are discussed in the *Operations Manual* in Chapter V under Search Module Narrative, and Chapter VII under Search Data Entry. Formulating the search request has been discussed in this manual under Chapter V, Searching the Data Base.

Task #1: To perform an expansion of the search statement logic. The basic CFS Search Module contained a search language powerful enough to meet URBANDOC's needs, but the rules for phrasing the question in logical relationships were burdensome to the analyst. (See Search Strategy section of the manual.) In the CFS search language, if the descriptors were to be coordinated in the relationship of **A** *AND* **(B** *OR* **C)**, the analyst was required to formulate the search statement as **(A** *AND* **B)** *OR* **(A** *AND* **C)**. In the following systems discussions, the term "request" will refer to all associated information entered into machine-readable form for a search (e.g., title, format, and search statement).

URBANDOC became aware of a set of programs created by the *Engineering Index* designed to handle this CFS language problem and acquired them. As a result, the analyst can prepare the search statement in a "shorthand" format and the system expands the search. The following examples indicate how the logical operator symbols in the search statement are used. The alphabetical symbols represent terms in the format equation and are referenced in the term table:

EXAMPLE 1: Simple case of *AND* logic

Question: Model Cities Programs and Chicago
Format: A*B

A: Model Cities Programs
B: Chicago

CONCEPT OF SERIAL FILE AND INVERTED FILE

INVERTED FILE →

SERIAL FILE ↓

Item				Descriptors					
	A	B	C	D	E	F	G	H	I
1	X			X			X		X
2		X	X			X			
3	X				X		X	X	
4			X		X	X	X		
5				X	X			X	X
6	X				X	X		X	
7		X	X	X			X		
8	X		X		X			X	X
9			X	X	X	X			

Figure 23

EXAMPLE 2: Simple case of *OR* logic

Question: Action programs or poverty programs
Format: A+B

A: action programs
B: poverty programs

EXAMPLE 3: Simple case of *AND NOT* logic

Question: Zoning -- not geographically oriented
Format: A/B

A: zoning
B: geo

EXAMPLE 4: Complex case of *AND NOT* and *OR* logic

Question: Zoning for all cities under city size-13
Format: (B+C+D)/A

A: zoning
B: city size-13
C: city size-14
D: city size-15

Note: It would appear that the format for this example should be A/(B+C+D). However, for compound terms used with the *AND NOT* operator, the compound terms must be listed first. (See also the Search Narrative in the *Operations Manual*.)

EXAMPLE 5: Complex case of *AND* and *OR* logic

Question: Model Cities Programs and poverty programs or Model Cities Programs and action programs
Format: A*(B+C)

A: Model Cities Programs
B: poverty programs
C: action programs

EXAMPLE 6: Simple case of *MODIFIED BY* logic

Question: Intergovernmental relations modified by federal state
Format: A

A: intergovernmental relations *E* federal state

Task #2: To validate each request against the Inverted File. The validation of the request term is an important addition to the Search Module since the basic search did not include such a validation and this necessitated manual verification. In addition, this step will append to each request term its frequency of usage. By arranging the least frequently used terms first, the search time is greatly decreased. Previously, such arrangement of terms was left to the document analyst.

Task #3: To convert the requests into CFS format. This program is important from an operations viewpoint. Because of the nature of an inverted file search, the sequence of the terms has a direct effect on the length of search time. (See Search Narrative in the *Operations Manual.*) If the terms in the request are arranged with the least frequently used terms first, the inverted file search will require substantially less processing time. This program removes the burden from the analyst and ensures that the terms are in the correct sequence.

Task #4: To edit the requests for logical consistency and syntax errors. The editing of the search requests are for such technical errors as: (a) syntax errors in the logic of the request, e.g., missing parentheses; (b) excessive length descriptors, e.g., forgetting to truncate a long descriptor to twenty-three characters; (c) missing search elements, e.g., missing title of the search, format of retrieval or other request information; and (d) incorrect sequencing of the search request units.

After the editing of the search requests, the user is given a chance to scan the detected errors. A request containing an error will be eliminated from the rest of the search process. The user may discontinue the search if the errors are too numerous or continue with the remaining valid requests.

Task #5: To perform the inverted file search to select the potential hits.

Task #6: To reduce the list of potential hits. At the completion of the inverted file search, the program has the lists of the document numbers for each search request term. It will reduce these lists to one list of document numbers which contain all the terms common to the request terms.

Task #7: To prepare for the serial file search. At this stage of the search, the title, format and full request data have been separated from the individual terms of the request. Before proceeding to the serial file search, each list of potential hits will be associated with the full information for its appropriate request.

Task #8: To perform the serial file search to select the final document hits.

Utilizing the Search Results

Task #9: To print the *Retrieval Report* in the expanded format according to the options in the search request. For a detailed discussion of the actual *Retrieval Report*, see the following section.

The basic CFS retrieval was not acceptable in format to the user. URBANDOC was

pleased to discover that the *Engineering Index* programs also provided for a new report format. Because of the importance of the *Retrieval Report,* it will be discussed in detail in the following section.

Search Module: The Retrieval Report

(Task #9 of the Search Module)

Unlike a data search, a bibliographic search produces a result that is not an end in itself but rather points to where the answers may be found. The user can examine the references to determine which document should be acquired. Basic to this, of course, is the user's ability to interpret the *Retrieval Report* containing the search results.

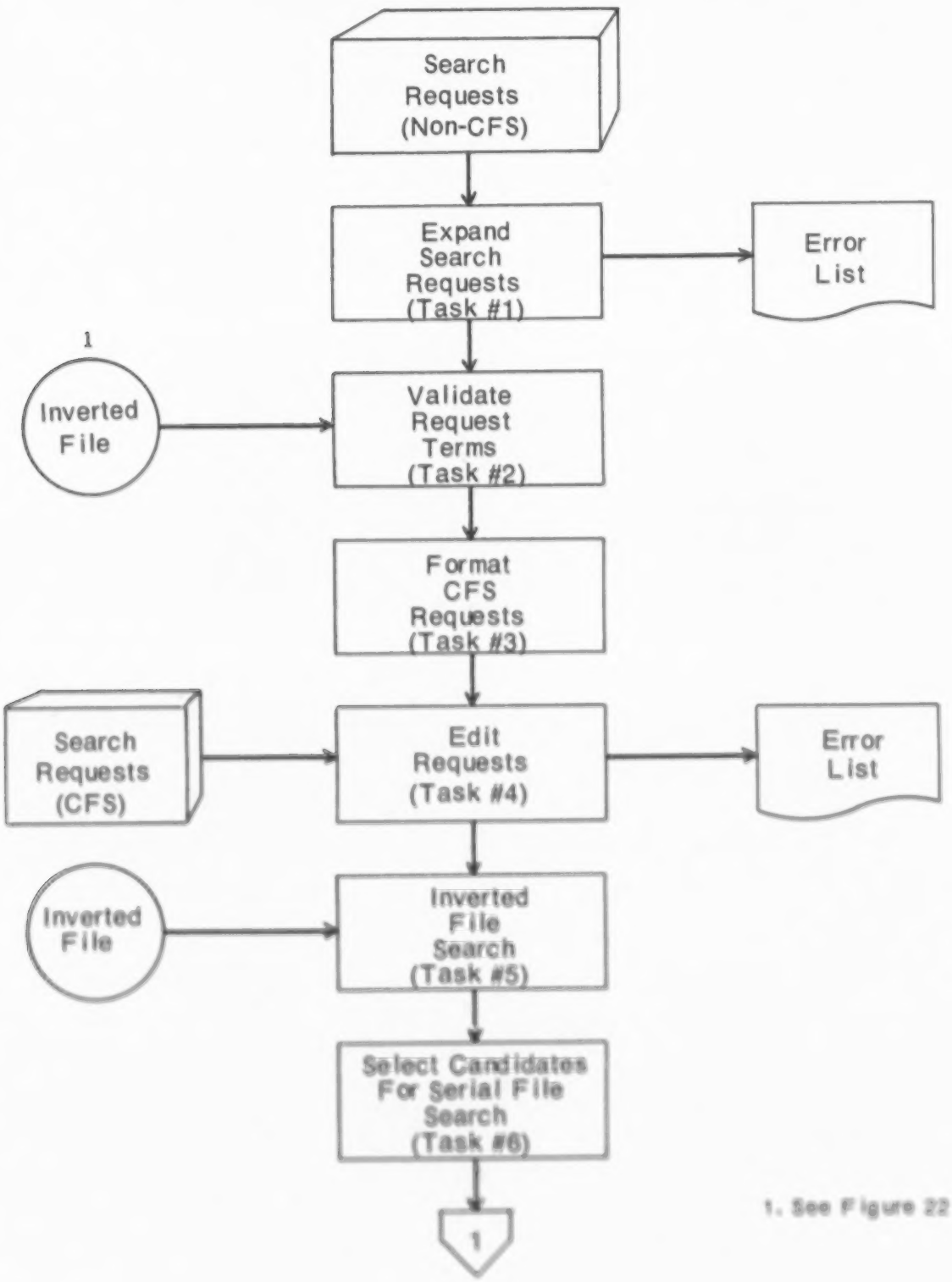
Each *Retrieval Report* has two sections: heading and the retrieved reference. The heading of this format includes the date of the search and the title information from the search worksheet. It may also have an informal wording of the request. Each retrieved reference is composed of three blocks of data: identification, content analysis, and descriptive analysis. The identification covers the document reference number, and this is the minimum that may be retrieved.

The content analysis will be present if selected as part of the output options. It is presented as a table in which each line represents one descriptor. Any subdescriptors for that term are presented on the line with the descriptor. Unlike the CFS format, all coding is removed from the descriptors. The terms that have caused a reference to be retrieved are flagged with the code from the term table of the search worksheet. Therefore, although the user is not aware of all the terms in the original request, he can see which terms were considered significant for any reference.

The descriptive analysis is printed by element. Each element is preceded by the heading line of "FREE TEXT SEGMENT xxx" where "xxx" is the element code. Only subject headings are specifically labelled. While most of the elements are self-evident, reference to the table of bibliographic elements can help with the finer distinctions. (For details see the Descriptive Analysis Section of the manual.)

The format of the *Retrieval Report* is illustrated in Figure 6.

SEARCH MODULE: GENERAL LOGIC OF COMPUTER PROCESSING



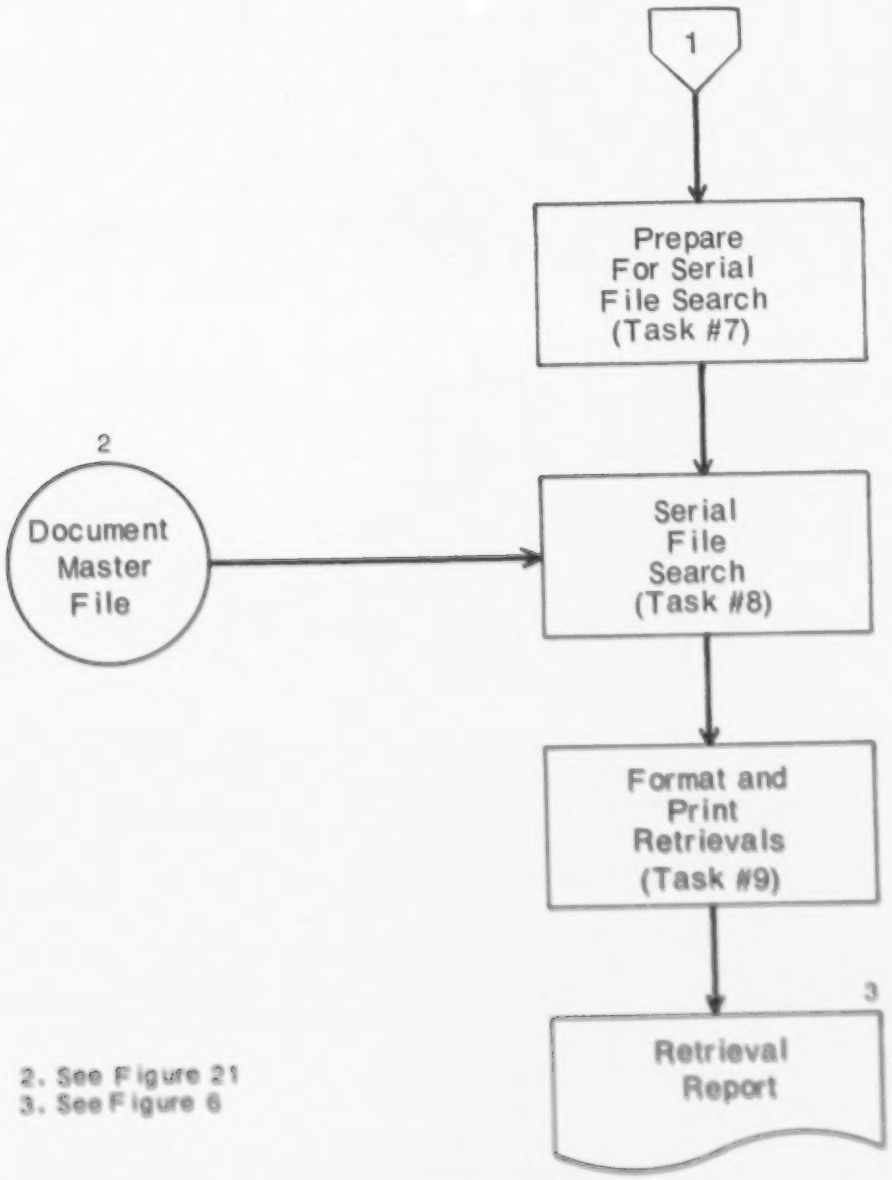
1. See Figure 22

Figure 34

(Continued on next page)

SEARCH MODULE: GENERAL LOGIC OF COMPUTER PROCESSING

(Continued from preceding page)



2. See Figure 21
3. See Figure 6

Figure 24 (Cont.)

Search Module: Program Inventory

Task #	Function	AUTOCODER Program	Processing Cycles
1	Expand Search Request	SEP1	*Retrieval Report* Production
2	Validate Request Terms	SEP2	*Retrieval Report* Production
3	Format the Request for CFS	SEP3	*Retrieval Report* Production
4	Edit Requests	PHASE1	*Retrieval Report* Production
5	Inverted File Search	PHASE2	*Retrieval Report* Production
6	Select Candidates For Serial File Search	PHASE3	*Retrieval Report* Production
7	Prepare for Serial File Search	PHASE4	*Retrieval Report* Production
8	Serial File Search	PHASE5	*Retrieval Report* Production
9	Print *Retrieval Report*	PHASE6	*Retrieval Report* Production

Publications Module

Function

The use of descriptors in computer searching is the essence of the Search Module. It is equally important to have access to the Document Master File by the various kinds of bibliographic information such as author, title, etc. These have been described in the descriptive analysis section of this manual.

The main function of URBANDOC's Publication Module is to produce, from the bibliographic information on the Document Master File, listings which can be searched visually for the desired bibliographic information. These listings form the three major sections of the URBANDOC's index journal, the *Input Index*. The three sections of the index are the Major Subject Listing, the Main Document listing, and all other indexes to the Document Master File. These listings will be discussed in detail.

When the Publications Module was designed, it was decided to keep it as open-ended as possible when creating the index sections and their contents. The reason behind this decision was the realization that the *Input Index* would change and perhaps the programming necessary to accomplish these revisions could be minimized.

For that reason, the *Input Index* programs are parametric. This means that the output is determined not by a fixed logic within the program but by input submitted through a lead card as part of the operating procedures. For example, the author indexes could consist of one index of all authors, corporate or personal, separate corporate and personal author indexes, or even separate indexes for main and added authors. This could be accomplished through the submission of the job parameters. Instead of being instructed to always select elements 01, 02, 05, 06, and 08 when creating the author index, the program selects only those elements identified in the lead card. The user can produce as many indexes as desired simply by entering more lead cards. New indexes can be produced by creating new lead cards in place of new programs.

The choice of the index format is also parametric. Different types of information lend themselves more readily to certain presentations. (1) For example, the personal author index and the geographic index are more amenable to a double-column presentation. The corporate author index and title index look best in single-column format. (2) From one index to another, and often from one issue to another, the spacing should include an extra space between new entries. (3) The title for a section may have to be changed. If the print programs of the Publications Module did not accept the format specifications (number or columns, spacing, title, etc.) as part of the operations data, it would require more programming to create the listings in the most advantageous format. It would also not be as practical to experiment with new formats in response to feedback.

Tasks

Task #1: To select the proper bibliographic elements and format them according to the requirements of the Publications Module.

Task #2: To format the main author and title information for the Major Subject Listing.

This includes extracting the author and title information for each document reference. This information will be reformatted with the subject heading inserted in the record. There will be one set of records for each subject heading assigned to a reference. The records will then be sorted to subject heading sequence.

Task #3: To print the Main Document Listing. As its name implies, the Main Document Listing is the major listing of the bibliographic material for references in the *Input Index*. While the selection of elements for this listing is parametric, the contents have been determined to some degree. The standard format of the report is illustrated in Figure 27.

Basically the references in the Main Document Listing are presented in sequence by document number or control number. The report is broken into series by kind of issuing agencies, which is, in turn, directly related to the document's main author. This was the original major document listing, but when many users expressed a preference for a subject organization, the Major Subject Listing was designed.

Task #4: To print the Major Subject Listing. This listing is a variation of the entries in the Main Document Listing. Each reference has been reduced to only main author, title, and document number. Main author and title are sufficient for browsing – which is the main purpose of this report. The document number allows for a tie to the prime citation in the Main Document Listing. The author-title subset is included once for each subject heading assigned to a reference. As its name implies, the Major Subject Listing is organized by subject heading. A sample of this report is illustrated in Figure 26.

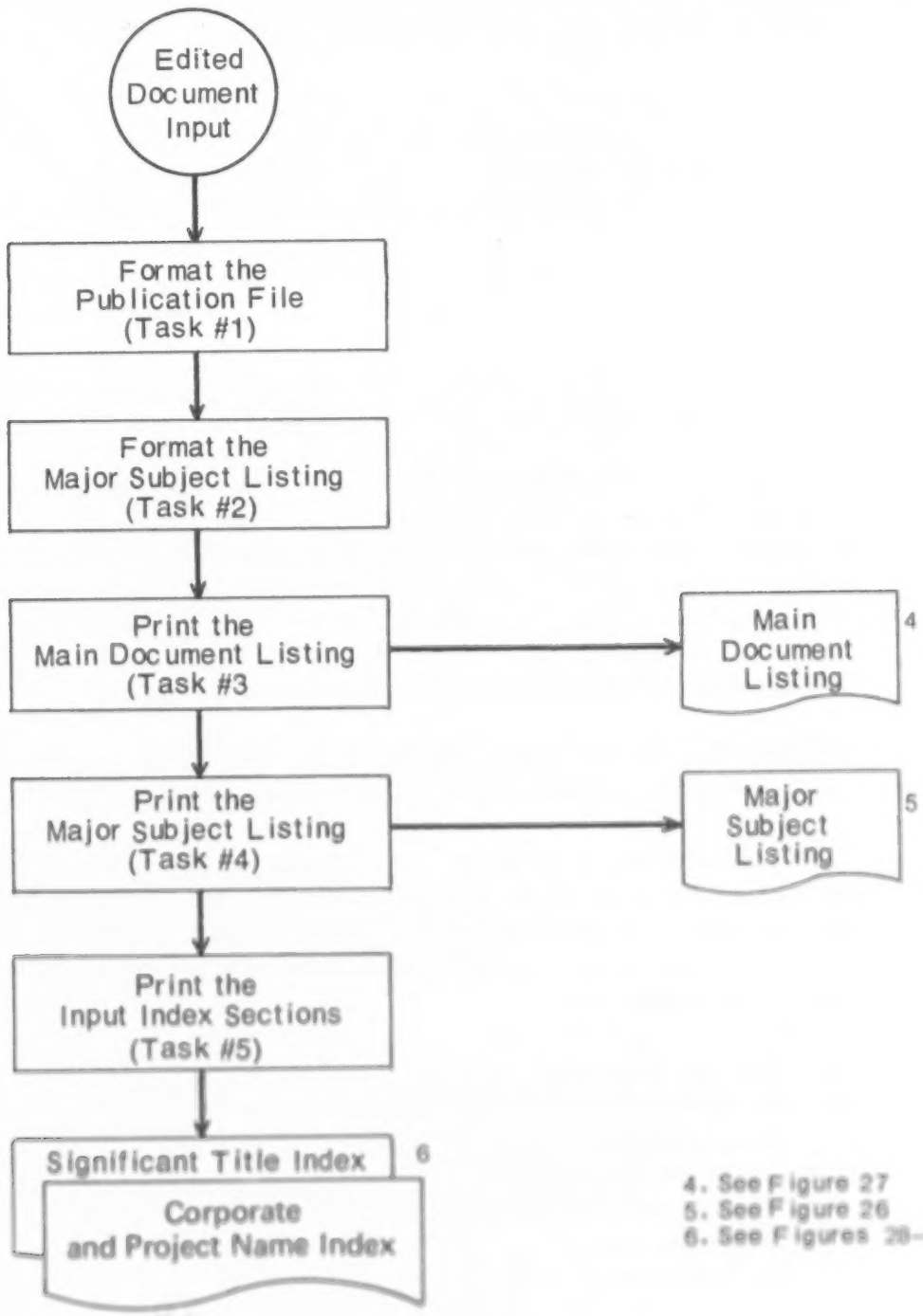
Task #5: To print the various sections of the *Index* such as the Personal Name Index, Corporate and Project Name Index, Significant Title Index, etc.

The third section consists of the other indexes to the Document Master File. These sections provide access to the Document Master File through the remaining bibliographic elements. Almost all of the bibliographic elements could theoretically generate an index to the Document Master File. URBANDOC has chosen to produce the following from the total lists of possibilities:

Personal Name Index
Corporate and Project Name Index
Consultant Index
Significant Title Index
Urban Planning Assistance Program Report Index
Geographic Index
Statutory Citation Index

Some of these are illustrated with their standard contents and format in Figures 28–31.

PUBLICATIONS MODULE: GENERAL LOGIC OF COMPUTER PROCESSING


Edited Document Input
Format the Publication File (Task #1)
Format the Major Subject Listing (Task #2)
Print the Main Document Listing (Task #3
Main Document Listing
4
Print the Major Subject Listing (Task #4)
Major Subject Listing
5
Print the Input Index Sections (Task #5)
Significant Title Index
Corporate and Project Name Index
6

4. See Figure 27
5. See Figure 26
6. See Figures 28–31

Figure 25

MAJOR SUBJECT LISTING

CLIMATE
COUNCIL OF PLANNING LIBRARIANS. EXCHANGE BIBLIOGRAPHY
INTERDISCIPLINARY APPROACH TO REGIONAL PLANNING
BCOPLEB69FJIR

CODING
SAN DIEGO CO. COMPREHENSIVE PLANNING ORGANIZATION
STANDARD LAND USE CODE-SAN DIEGO REGION
OSANDCC68UL

COLLEGE HOUSING
ONTARIO HOUSING
STUDENT HOUSING ACROSS ONTARIO
YONHC-A69..SH

COLLEGES, UNIVERSITIES
TEXAS A AND M UNIV.
DEFINITION OF THE ROLE OF THE UNIVERSITIES IN THE SOLUTION
OF URBAN PROBLEMS
CTEXAAM69DR

COLLEGES, UNIVERSITIES
NEW YORK. STATE. OFFICE OF PLANNING COORDINATION
BUFFALO-AMHERST CORRIDOR TECHNICAL REPORT
GNEWYPC69BA

COMMUNITY DEVELOPMENT
HARRIS, ROBIN
BUSINESS, ECONOMICS AND SOCIETY
CHARVPT69SI102

COMMUNITY FACILITIES PLANS
NEW YORK. CITY. MODEL CITIES-CENTRAL BROOKLYN
BROWNSVILLE PHYSICAL REDEVELOPMENT PLAN, A REPORT TO THE
PEOPLE
KNEWYMCCB69BP

COMMUNITY IMPROVEMENT
WARNER ROBINS, GA. PLANNING COMMISSION
NEIGHBORHOOD ANALYSES, WARNER ROBINS, GA.
KGECRWRPC69NA

COMMUNITY ORGANIZATIONS
MILLER, KENNETH H.
COMMUNITY ORGANIZATIONS IN THE GHETTO
CHARVPT69SI105

COMMUNITY ORGANIZATIONS
METROPOLITAN COMMITTEE ON PLANNING, NEW YORK
DEMAND FOR PLANNING SERVICES BY LOCAL COMMUNITIES
PNEWYPP69CP

COMMUNITY PLANNING
LEVIN, MELVIN R.
COMMUNITY AND REGIONAL PLANNING, ISSUES IN PUBLIC POLICY
ALEVIMR69CR

COMMUNITY PLANNING
PARSON CO., INC. METROPOLITAN PLANNING DEPT.
METROPOLITAN SUBAREA PLAN, HIGHLAND BROOKSIDE
LINGIPARP69PS

COMMUNITY PLANNING
METROPOLITAN COMMITTEE ON PLANNING, NEW YORK
DEMAND FOR PLANNING SERVICES BY LOCAL COMMUNITIES
PNEWYPP69CP

COMMUNITY RELATIONS
MIAMI. UNIV. CENTER FOR ADVANCED INTERNATIONAL STUDIES
PSYCHO-SOCIAL DYNAMICS IN MIAMI
CMIAMC66PS

CONTRACTS
[illegible], FREDERICK S.
WORKING AGREEMENT
VNCID-A69P60

CONTRACTS
[illegible], FREDERICK S.
[illegible] CONTRACTING, THE AMERICAN PUBLIC
CONTINUED

Figure 28

MAIN DOCUMENT LISTING

CCHICUS68IU — CHICAGO. UNIV. CENTER FOR URBAN STUDIES
IMPACT OF URBAN RENEWAL ON SMALL BUSINESS
1968. 264P.
DEMONSTRATION REPORTS
RELOCATION
RENEWAL AREAS
SMALL BUSINESS

CCHICUS68IU101 — BERRY, BRIAN, J.L.
HYDE PARK-KENWOOD CASE
IN CCHICUS68IU. P.9-170
ARTISTS QUARTERS
RETAIL TRADE
SHOPPING CENTERS

CCHICUS68IU102 — BERRY, BRIAN J.L.
NATIONAL EXPERIENCE
IN, CCHICUS68IU. P.173-232
COMPENSATION
LEGISLATION

CCCNHIP69NI — CONNECTICUT. UNIV. INSTITUTE OF PUBLIC SERVICE
NEED FOR INVESTMENT IN MUNICIPAL COMPUTER SYSTEMS
MUNICIPAL INFORMATION TECHNOLOGY PROGRAM SERIES 5. 1969.
16P.
INFORMATION SYSTEMS
SMALLER CITIES

CFLCRPA69SD — FLORIDA. UNIV. PUBLIC ADMINISTRATION CLEARING SERVICE
STATE DEPARTMENT OF LOCAL AFFAIRS
GAINSVILLE, FLA., 1969. 16P.
STATE GOVERNMENT
TECHNICAL ASSISTANCE

CMARVGSI60NC — HARVARD UNIV. GRADUATE SCHOOL OF DESIGN. NEW COMMUNITIES
PROJECT
NEW COMMUNITIES, ONE ALTERNATIVE. A PRELIMINARY STUDY OF
A NEW CITY
CAMBRIDGE, 1968. 76P.
NEW TOWNS
PLAN IMPLEMENTATION
URBAN DESIGN

CHARVGSP69SI — HARVARD UNIV. PROGRAM ON TECHNOLOGY AND SOCIETY
SOCIAL INNOVATION IN THE CITY
HARVARD UNIV. PRESS, 1969. 230P.
79 GARDEN ST., CAMBRIDGE, MASS. 02138
ORGANIZATION
PUBLIC SECTOR
URBAN AFFAIRS

[illegible] — [illegible]
[illegible]
[illegible]
[illegible]

[illegible] — [illegible]
[illegible]
[illegible]
[illegible]

[illegible] — [illegible]
[illegible]
[illegible]

Figure 27

PERSONAL NAME INDEX

ABEND, NORMAN A.
YTRAQ-A69ANTI
ALEXANDER, DONALD G.
YNACI-B69ADIN
ALEXANDER, LAURENCE A.
ADOWNR869ALWT
AMES, ARDEE
YJOHO-A69AAWP
APGAI, MAHLON
CHARVPT69SI106
BEGLEY, F.
YBLIN-B69MHBH
BERKELEY, ELLEN PERRY
YACUF-A69BEEE YACUF-A69BEUR
BERRY, BRIAN J.L.
CCHICUS68IU CCHICUS68IU101
CCHICUS68IU102
BROWN, WILLIAM S.
YBLIN-B69MHBH
BRYANT, FARRIS
DACIR..69AR
CAMPBELL, LOUISE
YCITY-A69CLPY
CAPRON, WILLIAM M.
YPBAR-B69GBSB
CHURCHMAN, C.W.
YPBAR-B69GBSB
CITRO, CONSTANCE F.
YSPLB-A69CCCB
CORNELL, RALPH D.
YLSAR-A69CRGB
CRAIN, JOHN L.
ASTANRI69TE
CRAWFORD, DANA
YHISP-A69CDER
CRIPPS, ERIC L.
YTPIN-A69CEMS
DALTON, PETER D.
YBLIN-B69MHBH
DE MARTINI, HOWARD
ONEWYHR69RC
DEAN, MICHAEL S.
CHARVPT69SI106
DOUGLAS, PAUL
DNATCUP68BA
DROR, YEHEZKEL
YPBAR-B69GBSB
DUBOS, RENE
YEKIS-A69DRCM
FABOS, JULIUS
BCOPLEB69FJIR
FARACI, PIERO
BASPOPA69FPES
FIELD, RALPH M.
GPUERPB68PA
GAFFNEY, MASON
AINSTDA68LE
GARVEY, JOHN, JR.
YNACI-B69GJET
GOLDSTEIN, HENRY
KNEWYCP..68BP
GOLDSTON, ELI
YATER-A69GEBU
GORSCHBOTH, FREDERICK F.
YNACI-B69GFCA
GREEN, JIM
YATER-A69GJUE
GROBERG, ROBERT
BNAHRO.69CR
GROSS, BERTRAM M.
YPBAR-B69GBSB
HAMPDEN-TURNER, CHARLES
CHARVPT69SI104
HARKINS, PETER B.
YNACI-B69MPRS
HAY, B.A.
YBLIN-B69MHBH
HAYDEN, BRUCE
YBLIN-B69MHBH
KARLEN, INGVAR
YBLIN-B69KICP
KLING, VINCENT G.
YBLIN-B69MHBH
LAWRENCE, PAUL R.
CHARVPT69SI105
LEBEAUX, CHARLES N.
AWOLFEP69CR
LEDYARD, JULIA
BCOPLEB69LJCP
LEVIN, MELVIN R.
ALEVIMR69CR
LLEWELLYN-DAVIES, LORD
YCHSU-A69LDPD
MARON, M.E.
YSPLB-A69MMDB
MARRIS, ROBIN
CHARVPT69SI CHARVPT69SI102
MCCLELLAN, KEITH
YLAEC-A69MKOR
MEDRICH, ELLIOTT A.
YLAEC-A69MKOR
MEYER-HEINE, GEORGES
AMEYEHG68HA
MEYERS, HAROLD B.
YFORT-A69MHTE
MICHAELSON, LOUIS
KSEATHA..69AT
MILLER, DAVID S.
YBLDG-A69MDSB
MILLER, H.W., JR.
YBLIN-B69MHBH
MILLER, KENNETH H.
CHARVPT69SI105
MINER, RALPH W.
BASPOPA69MRCH
MOREHOUSE, THOMAS A.
YAIPJ-A69MTHA
MORRIS, ROBERT L.
YNACI-B69MRIN
MOSHER, FREDERICK C.
YPBAR-B69GBSB
MUSHKIN, SELMA J.
YPBAR-B69GBSB
MUTH, RICHARD F.
AINSTDA68LE
OBLOCK, ROBERT
CHARVPT69SI106
PARSONS, SANDRA J.
CCHICUS68IU101 CCHICUS68IU102
PLATT, JOHN R.

Figure 28

CORPORATE AND PROJECT NAME INDEX

HUDSON RIVER VALLEY COMMISSION	CTEXAAM69DR
	CNEWYHR69RC
	CNEWYRP69FO
HYDE PARK-KENWOOD, CHICAGO	CCHICUS68IU
INSTITUTE FOR COMMUNITY STUDIES, KANSAS CITY	PINSTCS69AR
INSTITUTE FOR DEFENSE ANALYSES. PROGRAM ANALYSIS DIV.	AINSTDA68CR
	AINSTDA68LE
	AINSTDA68SC
INSTITUTE OF PUBLIC ADMINISTRATION, NEW YORK	AWALSAH69UC
INTERIOR DEPT. LIBRARY	DOUTDRB69IS
INTERNATIONAL FEDERATION FOR HOUSING AND PLANNING	AMEYEHG68HA
KENTUCKY. UNIV.	BNASBO.68SP
LOS ANGELES CO., COUNTY ENGINEER DEPT.	LLOSARPC.69MM
LOS ANGELES COUNTY REGIONAL PLANNING COMMISSION	LLOSARPC.69MM
LOWER EAST SIDE DEVELOPMENT PROGRAM, NEW YORK	KNEWYHD..69LE
MALVERN TOWN DEVELOPMENT, TORONTO	YONHO-A69..MM
MARION CO., IND. METROPOLITAN PLANNING DEPT.	LINDIMAMP68HUA
	LINDIMAMP68HUB
	LINDIMAMP69MS
METROPOLITAN COMMITTEE ON PLANNING, NEW YORK	PNEWYMP69DP
METROPOLITAN COUNCIL OF THE TWIN CITIES AREA, SAINT PAUL	CSTPLMC69MO
METROPOLITAN REGIONAL COUNCIL, NEW YORK	CNEWYMR69AR
	CNEWYMR69CS
	ONEWYRP69FB
	CNEWYRP69FO
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS	ODCMWCG69RD
MIAMI. UNIV. CENTER FOR ADVANCED INTERNATIONAL STUDIES	CMIAMCA69PS
MIAMI URBAN AREA TRANSPORTATION STUDY	CMIAMUA69PT
MID STATE REGIONAL PLANNING AGENCY, MIDDLETOWN, CONN.	OCONNMR69SH
MID-HUDSON PATTERN FOR PROGRESS	ONEWYRP69FO
MINNESOTA. STATE PLANNING AGENCY	GMINNSP69BR
MITCHELL FRAMING SYSTEM	CHARVDS68NC
NASSAU-SUFFOLK CO., N.Y. REGIONAL PLANNING BD.	CNEWYNS68HB
NATIONAL ALLIANCE OF BUSINESSMEN	ASTANRI69TE
NATIONAL ASSN. OF COUNTIES	BNSRC..69RC
NATIONAL ASSN. OF HOUSING AND REDEVELOPMENT OFFICIALS	BNAHRO.69CR
	BNAHRO.69NH
NATIONAL ASSN. OF STATE BUDGET OFFICERS	BNASBO.68SP
	BNASBO.69BS
NATIONAL COMMISSION ON URBAN PROBLEMS	DNATCUP68BA
	DNATCUP68BA101
	DNATCUP68BA102
	DNATCUP68BA103
	DNATCUP68BA104
	DNATCUP68BA105
	DNATCUP68BA106
	DNATCUP68BA103
NATIONAL INSTITUTE OF ENVIRONMENTAL SCIENCES	BNSRC..69RC
NATIONAL LEAGUE OF CITIES	BNSRC..69RC
NATIONAL SERVICE TO REGIONAL COUNCILS	YBLIN-B69NSFD
NATIONAL SWEDISH INSTITUTE FOR BUILDING RESEARCH	PBOSTBB69BB
NEIGHBORHOOD ASSN. OF THE BACK BAY, BOSTON	
NEW JERSEY. COMMUNITY AFFAIRS DEPT. STATE AND REGIONAL PLANNING DIV.	GNEWJCA69AG
NEW ORLEANS. MAYOR	KNEWOM...68PP
NEW YORK. CITY. CITY PLANNING COMMISSION	KNEWYCP..68BP
	KNEWYCP..68NY
	KNEWYCP..68RF
NEW YORK. CITY. HOUSING AND DEVELOPMENT ADMIN.	KNEWYHD..69LE
NEW YORK. CITY. MODEL CITIES-CENTRAL BROOKLYN	KNEWYMCCB69BP
	KNEWYMCCB69PP
NEW YORK. CITY. MODEL CITIES-HARLEM-EAST HARLEM	KNEWYMCHE69PP
NEW YORK. STATE. OFFICE OF PLANNING COORDINATION	GNEWYPC69BA
	GNEWYPC69IS
NEW YORK. STATE UNIV. BUFFALO	GNEWYPC69BA
NORTH CAROLINA. CONSERVATION AND DEVELOPMENT DEPT.	

Figure 29

SIGNIFICANT TITLE INDEX

HOUSING AND URBAN RENEWAL -2	LINCIMAMP68HUB
HOUSING, BETTER HOMES FOR BETTER COMMUNITIES	CNEWYNS68HB
HOUSING BILL	YHORV-A69..HB
HOUSING PROGRAMS	CNATCUP68BA102
HOW WOULD REVENUE SHARING WORK	YNACI-B69HPRS
HUMAN APPROACH TO URBAN PLANNING	AMEYEHG68HA
HYDE PARK-KENWOOD CASE	CCHICUS68IU101
IMPACT OF NEW TOWNS, PART 1	YNACI-B69MRIN
IMPACT OF URBAN RENEWAL ON SMALL BUSINESS	CCHICUS68IU
IMPROVEMENT OF THE ENVIRONMENT	CNATCUP68BA106
IMPROVING OUR NATIONAL AIRPORT SYSTEM	YNACI-B69ADIN
INDEX OF SELECTED OUTDOOR RECREATION LITERATURE	COUTDRB69IS
INFORMATION FOR PLANNING	AWHITB.69IP
INTERDISCIPLINARY APPROACH TO REGIONAL PLANNING	BCOPLEB69FJIR
INTERGOVERNMENTAL COMMISSIONS, THE INTERSTATE FEDERAL APPROACH	YSGOV-A69ZFIC
INTERINDUSTRY STUDIES AND MODEL DEVELOPMENT	GNEWYPC69IS
JACKSON PARK, BURNHAM PARK AND LAKE SHORE DRIVE, BETWEEN 47TH AND 67TH STREETS	KCHICDP..69JP
LAND AS AN ELEMENT OF HOUSING COSTS.	AINSTDA68LE
LARGE SCALE DATA BANKS	YSPLB-A69MMDB
LOW INCOME HOUSING	CHARVPT69SI106
LOW-INCOME HOUSING DEMONSTRATION PROGRAM, GRAYLING, METLAKATLA AND BETHEL, ALASKA	GALASSH68LI
LOWER EAST SIDE HOUSING INVENTORY 1960-1968	KNEWYHD..69LE
MALIBU MASTER PLAN OF STORM DRAINS	LLOSARPC.69MM
MANAGEMENT SYSTEM FOR PLANNING	YTPIN-A69CEMS
MASS TRANSPORTATION IN THE TRI-COUNTY REGION, DEVELOPMENT PLAN AND IMPROVEMENT PROGRAM	CMICHTC69MT
METROPOLITAN OPEN SPACE SYSTEM	CSTPLMC69MO
METROPOLITAN SUBAREA PLAN, HIGHLAND BROOKSIDE	LINCIMAMP69MS
NATIONAL EXPERIENCE	CCHICUS68IU102
NATIONAL HOUSING GOALS AND THE NEED FOR A COMPREHENSIVE NATIONAL HOUSING POLICY	BNAHRC.69NH
NEED FOR INVESTMENT IN MUNICIPAL COMPUTER SYSTEMS	CCONNIP69NI
NEIGHBORHOOD ANALYSES, WARNER ROBINS, GA.	KGECRWRPC69NA
NEIGHBORHOOD ANALYSIS, APEX, N.C.	KNORCAPPB69NA
NEIGHBORHOOD ANALYSIS, COMMUNITY FACILITIES PLAN, PUBLIC IMPROVEMENTS AND CAPITAL BUDGET, RAINSVILLE, ALA.	KALABRAPC69NA
NEW COMMUNITIES, ONE ALTERNATIVE. A HARVARD STUDY OF A NEW CITY	CHARVDS68NC
NEW YORK CITY PUBLIC LIBRARIES. A NEW LOOK AND PROPOSED BUDGETING PRIORITIES.	KNEWYCP..68NY
NEW YORK METROPOLITAN REGION COMMUNITY STUDIES ANNUAL-1968	CNEWYMR69CS
NEW 330 MILLION BALANCED COMMUNITY	YONHO-A69..MM
NON-PROFIT HOUSING CENTER	BURBAA.69NH
OUTDOOR RECREATION.ECONOMIC CONSIDERATION FOR OPTIMAL SITE SELECTION AND DEVELOPMENT	YLAEC-A69MKOR
PARTNERSHIP FOR PROGRESS	KNEWYMCHE69PP
PAUL YLVISAKER, THE ART OF THE IMPOSSIBLE	YCITY-A69CLPY
PHASE 2 PLAN, EAST NEW YORK MODEL CITIES	KNEWYMCCB69PP
PLAN AND PROGRAM FOR THE PRESERVATION OF THE VIEUX CARRE	KNEWOM...68PP
PLAN IMPLEMENTATION FOR THE COMPREHENSIVE DEVELOPMENT PLAN, CORAL GABLES, FLORIDA	KFLORCGCC69PI
PLANNED RESEARCH AND DEVELOPMENT DISTRICTS	YAIDJ-B69WJPR
PLANNING-PROGRAMMING-BUDGETING SYSTEM REAXAMINED. DEVELOPMENT, ANALYSIS AND CRITICISM	YPBAR-B69GBSP
POPULATION, CURRENT ESTIMATES AND PROJECTIONS, DENVER SMSA	ODENVRC69PC
POPULATION, 1985	LNEWYWEPD69PO
POVERTY, PLANNING AND POLITICS IN THE NEW BOSTON. ORIGINS OF ABCD	ATHERS.69PP
PRESERVATION OF AGRICULTURAL LAND IN PUERTO RICO	GPUERPB68PA
PROBLEMS OF DESIGN	YCHSU-A69LDPD
PROPOSED TRANSPORTATION MASTER PLAN FOR DADE COUNTY	CMIAMUA69PT
PSYCHO-SOCIAL DYNAMICS IN MIAMI	CMIAMCA69PS

Figure 30

SPECIAL INDEXES

CONSULTANT INDEX

ABELES, SCHWARTZ AND ASSOCIATES	KNEWYHD..69LE
CANDEUB, FLEISSIG AND ASSOCIATES	GCONNCA69CH
	KFLORCGCC69PI
HAINES LUNDBERG AND WAEHLER	GPUERPB68PA
HILL, ERIC AND ASSOCIATES	KGEORWRPC69NA
MARCOU, OLEARY AND ASSOCIATES	KNEWOM...68PP
METCALF AND EDDY, INC.	OCONNSR69RR
NATIONAL PLANNING ASSN.	GNEWYPC69IS
PRESTON, E.S. AND ASSOCIATES	OTOLERA69PS
RAYMOND AND MAY ASSOCIATES	ONEWYNS68HB
SOUTHERN CALIFORNIA UNIV. PUBLIC SYSTEMS RESEARCH INSTITUTE	OCALISA69RC
TEC-SEARCH, INC.	KWISCGEPC69CP
THABIT, WALTER	PNEWYMP69DP

STATUTORY CITATION INDEX

AIR QUALITY ACT OF 1967. U.S.	YNACI-B69GFCA
FEDERAL-AID HIGHWAY ACT OF 1962. U.S.	YAIPJ-A69MTHA
HOUSING ACT OF 1968. U.S.	DNATCUP68BA102
NEW COMMUNITIES ACT OF 1968. U.S.	YNACI-B69MRIN
NEW JERSEY PLANNING ENABLING ACT OF 1953.	GNEWJCA69AG
U.K. CLEAN AIR ACT OF 1968.	TUKMHLG69RM
U.K. COUNTRYSIDE ACT OF 1968.	TUKMHLG69RM
U.K. TOWN AND COUNTRY PLANNING ACT OF 1968.	TUKMHLG69RM

Figure 31

Publication File Description

While the Inverted File reformats the content analysis portion of the bibliographic record, the Publication File reformats the descriptive analysis data. This file isolates each bibliographic entry into a separate listing. These entries can be sorted and combined into many different formats to produce the various sections of the *Input Index.*

The Publication Records are stored on magnetic tape. There is no limit to the number of records that can be included in the file since there is a provision for a multiple reel file. In general, the Publication File contains the basic elements which are manipulated and printed to produce the *Input Index.* (See Figure 32.)

The Publication File is the major data file in this module. Many of the various sections of the *Input Index* are generated from this one file. This can be managed by sorting the file into the correct sequence for each index. Because of this multiple usage of the files, there is no fixed sequence of the records on the file.

PUBLICATION FILE RECORD LAYOUT

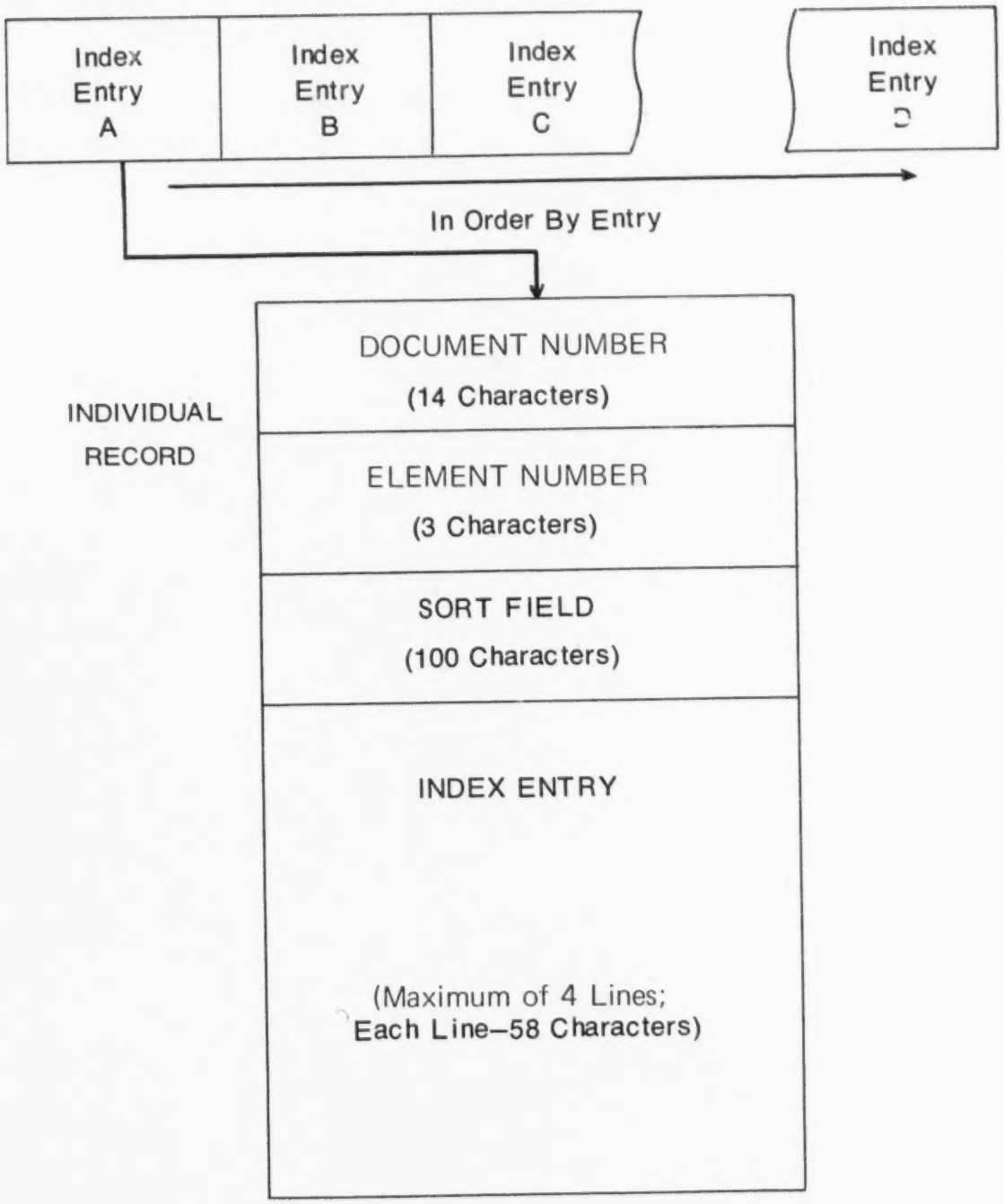


Figure 32

Publications Module: Program Inventory

Task #	Function	COBOL Program	Processing Cycle
1	To Select and Format the Publication File	P0010	Editing and Validation, *Input Index* File Maintenance
2	To Format the Major Subject Listing	P0040	Editing and Validation, *Input Index* File Maintenance
3	To Print the Main Document Listing	P0050	Editing and Validation, *Input Index* Production
4	To Print the Major Subject Listing	P0050	Editing and Validation, *Input Index* Production
5	To Print the Index Sections	P0060, P0070	Editing and Validation, *Input Index* Production

Local Systems Module

The original work program called for the development of a subsystem geared to the technical resources that may be available away from the national center. As first conceived, the possibilities for local, and especially, regional developments ranged from pooled use of copies of the centrally supplied tapes to the production of supplemental tapes with input tailored to more detailed local needs. As cited in the grant application:

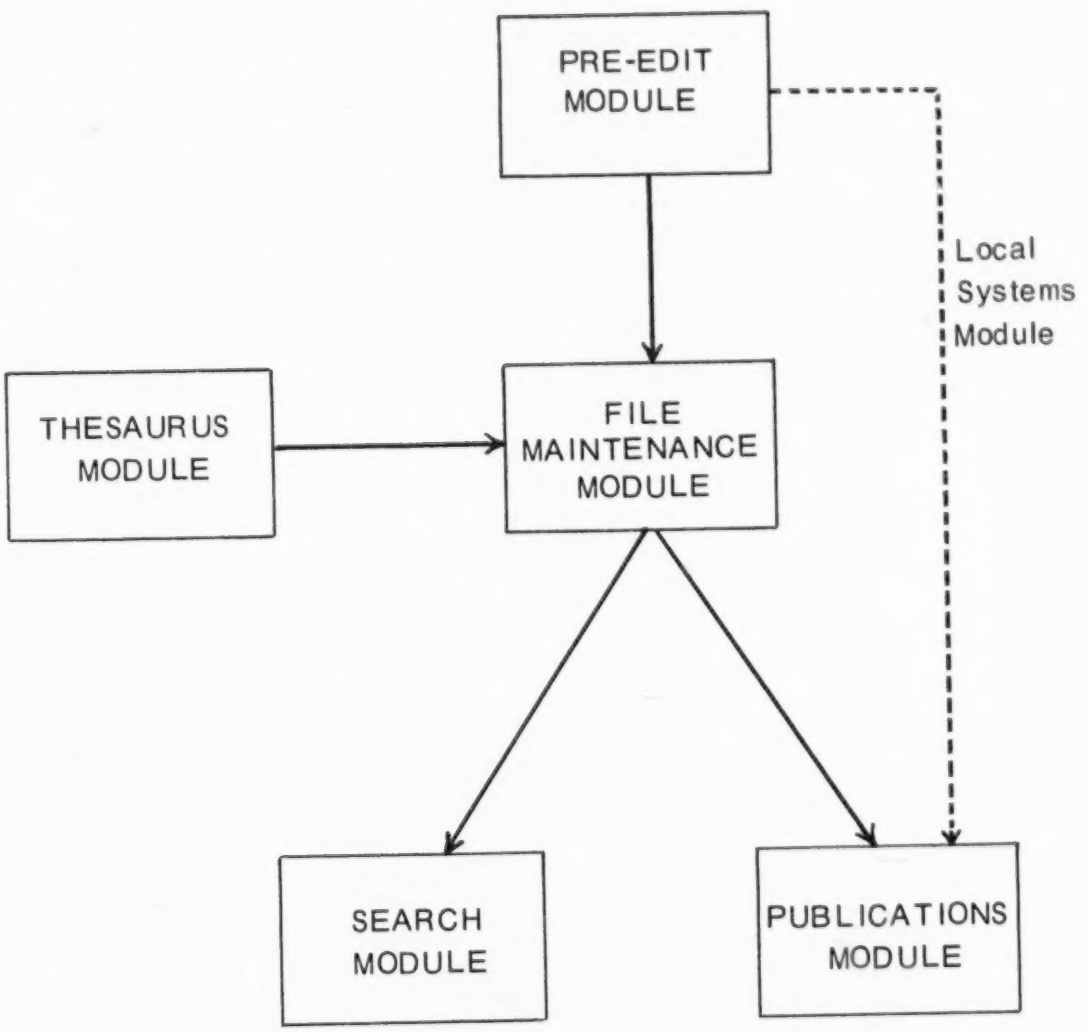
> Where substantial collection of publications is contemplated, such as for an ongoing URBANDOC, the over-all system would ordinarily be designed for a large computer installation, with its many capabilities for storing and manipulating data, and for consolidating various operations at both input and output. In small libraries, a smaller computer can still perform within tolerable time and cost limits, although possibly with more manual intervention. It is essential, however, that such systems be designed in conjunction with the over-all, to ensure upward compatibility. This way, as local machine capability increases, the more sophisticated features can be added without damage to work already accomplished. By the same token, it will encourage lateral compatibility from region to region.

With the availability of both an index journal and computer retrievals as products of the total information system, it was decided to select only the index journal for implementation into the subsystem. URBANDOC's experiences during the demonstration grant period indicated that it would not be appropriate to attempt localized searching. First, the modules and programs required to support searching are the most difficult. They were not written by URBANDOC and therefore would be the hardest to support, both centrally and locally. Second, the programming language of these modules is AUTOCODER, which is applicable only to the IBM 1401 computer. While this computer configuration was quite prevalent at the start of the demonstration (1965), this is no longer the case. There has been a marked shift to third-generation computing equipment.

On the other hand, the production of a localized index journal seemed to have many advantages. The tool could be more widely used than a customized retrieval. This approach would tend to reduce the unit cost per output product. The programs were written by URBANDOC in the COBOL programming language. This makes the product more machine-independent and thus more acceptable to the local user. (COBOL is supported by computer manufacturers for many of their computer models.)

The Pre-edit Module was combined with the Publications Module to form the Local Systems Module, a stand-alone system for the production of a local index journal. This module is capable of creating all the sections and components included in the URBANDOC *Input Index*. In addition, the Pre-edit Module provides the capability of editing the data and correcting the input. The use of the Local Systems Module allows almost the full editing and validation features available at URBANDOC. (See Pre-edit Module.) Figure 33 illustrates the relationship of the Local Systems Module within the total URBANDOC system.

DATA PROCESSING COMPONENTS



KEY

———— URBANDOC systems flow

- - - - - - - - - - - - Local Systems Module flow

Figure 33

Search-Publications Interface

The previous discussions have stated that the products of URBANDOC's information system were the *Retrieval Report* (for retrospective searches) and the *Input Index* (for current bibliographies). Sometimes it is necessary to produce a *Retrieval Report* in the format of the *Input Index*. This is especially true for a retrospective bibliography. With the completion of the Search-Publications Interface, this is now possible.

The output of the CFS Search Module is a printed bibliography (which URBANDOC named the *Retrieval Report*). This listing did not contain any indexes such as those in the *Input Index*. The Search Module did not produce a formatted tape output which would allow the user to present the retrieval in some other manner.

The Search-Publications Interface now creates tape output from the search process. This intermediary tape file is reformatted into the standard publications file format so that the retrieval results could be processed by the Publications Module to form a specialized issue of the *Input Index*. The format of this issue would be identical to that of the *Input Index*. (For details, see the Publications Module.) The name of this new product is the Subject Series.

PROCESSING CYCLES

Although URBANDOC has discussed the organization of its systems design and programs in terms of modules, it is more appropriate to discuss computer operations in terms of processing functions or cycles. The concept of processing cycles was one that gradually evolved through the maintenance of searchable files and the production of field-test issues of the *Input Index.* The processing cycle became a larger grouping crossing module lines and imposing a superstructure over the already existing modules. In all, there are six processing cycles.

Editing and Validation covers the first processing of the input data. Much of the processing done at this stage covers the computer editing and validation of the input (including the CFS editing) and the production of the sample copy of the *Input Index.* This processing cycle could create the input to a potential group profile current-awareness service.

Input Processing is the next cycle after Editing and Validation. It is here that the computer-detected errors of the previous cycle as well as the visually detected errors of the sample *Input Index* are corrected. The revisions are first edited for further errors. The edited and updated document input forms a synchronized set of references for both the *Input Index* and the *Retrieval Report.*

At this point, the input has been completely processed through the preparatory stage. That is, to this point, no product has been created. Operations through Input Processing could be considered the necessary preliminaries to the creation of any output. The subsequent operations will be devoted to creating either of the two products: the *Input Index* or the *Retrieval Report.*

The remaining processing consists of the *Retrieval Report* and *Input Index* processing. *Retrieval Report* processing is divided into *Retrieval Report* File Maintenance and *Retrieval Report* Production. The former covers updating the existing Document Master and Inverted Files and printing the reports for manual searching. *Retrieval Report* Production covers the actual searching of the computer files.

Input Index processing also consists of two phases. *Input Index* File Maintenance is the processing and the manipulation of the tape files to the point where camera-ready copy may be produced. *Input Index* Production is the creation of the camera-ready copy.

EDITING AND VALIDATION

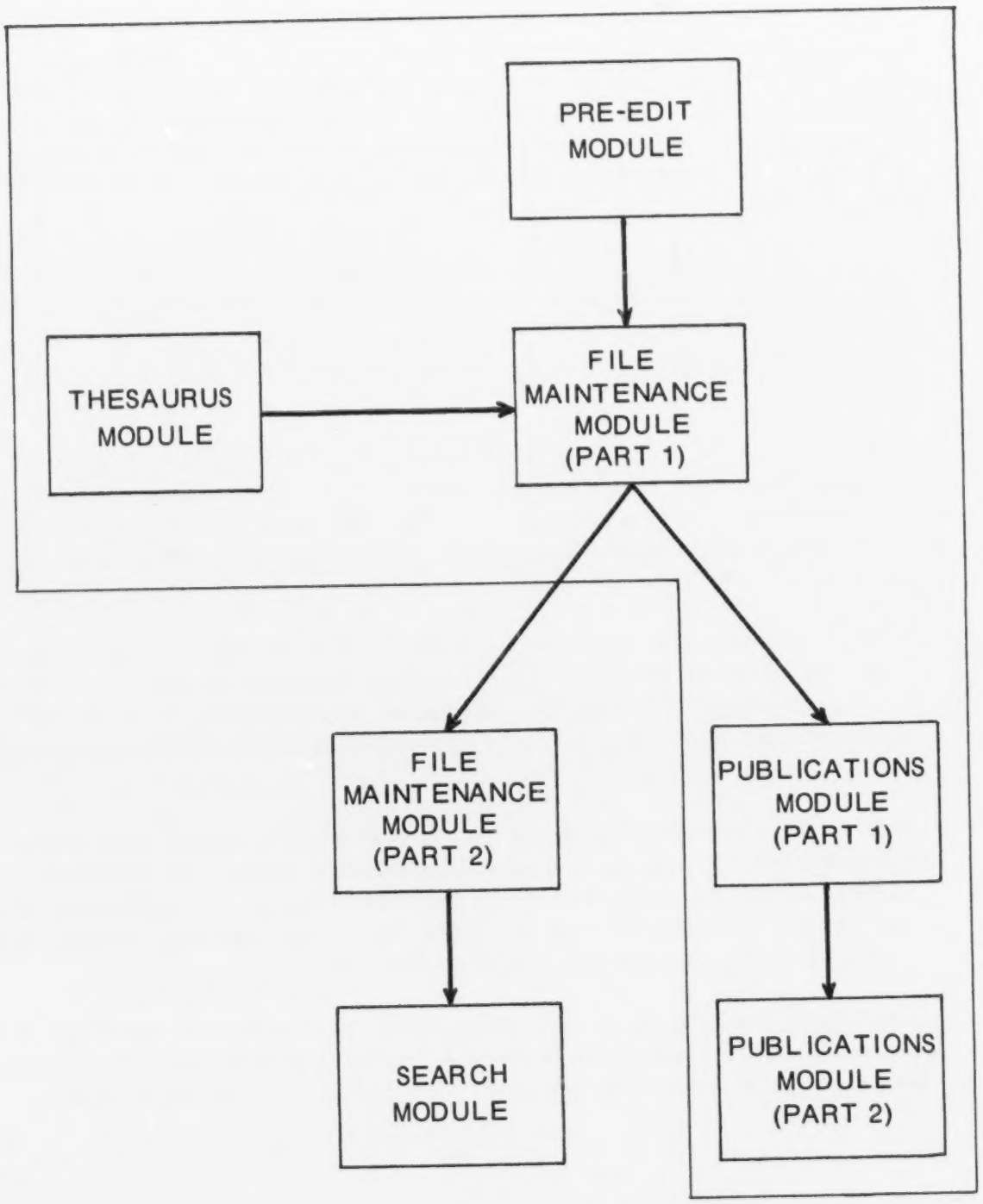


Figure 34

INPUT PROCESSING

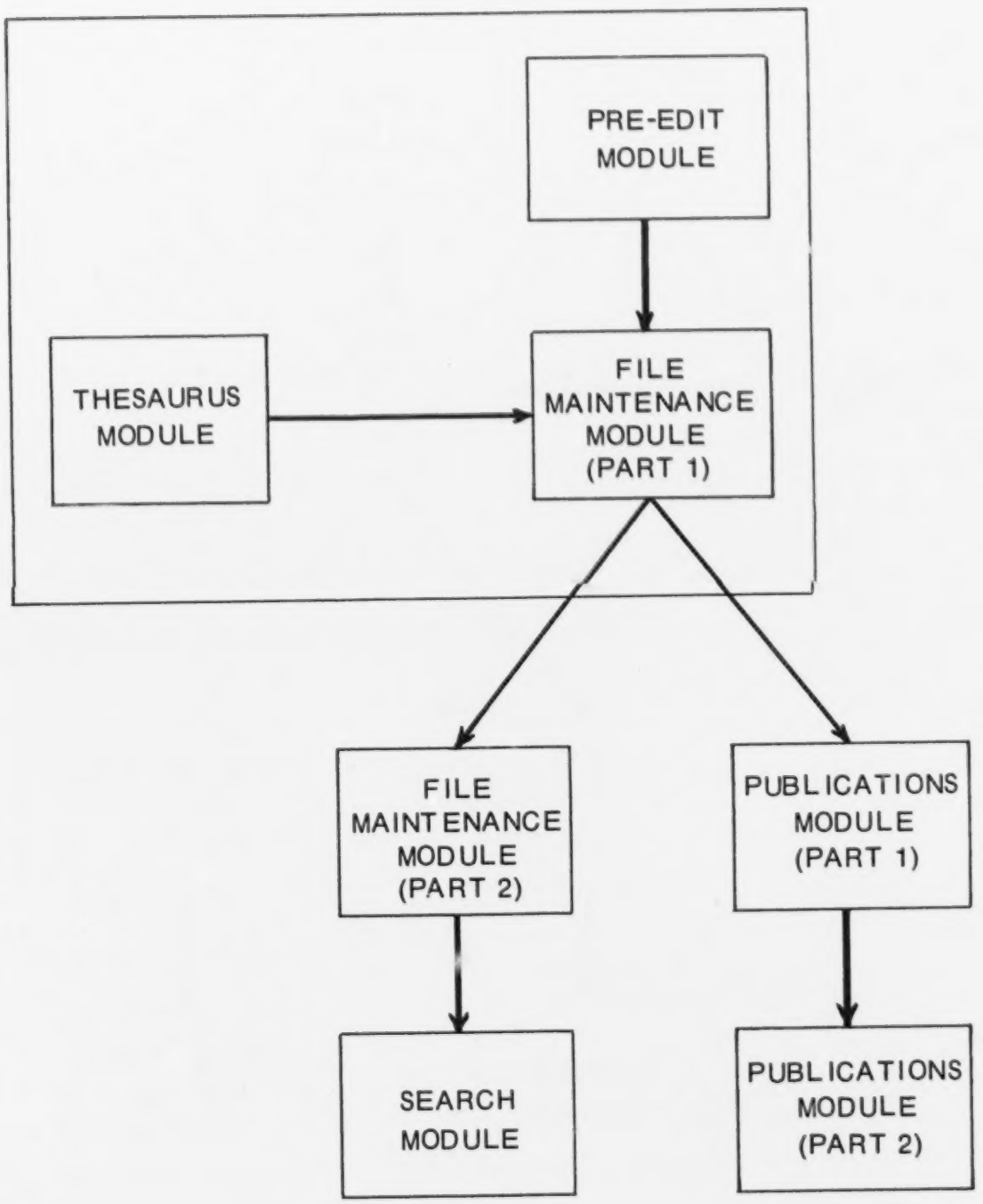


Figure 35

INPUT INDEX FILE MAINTENANCE

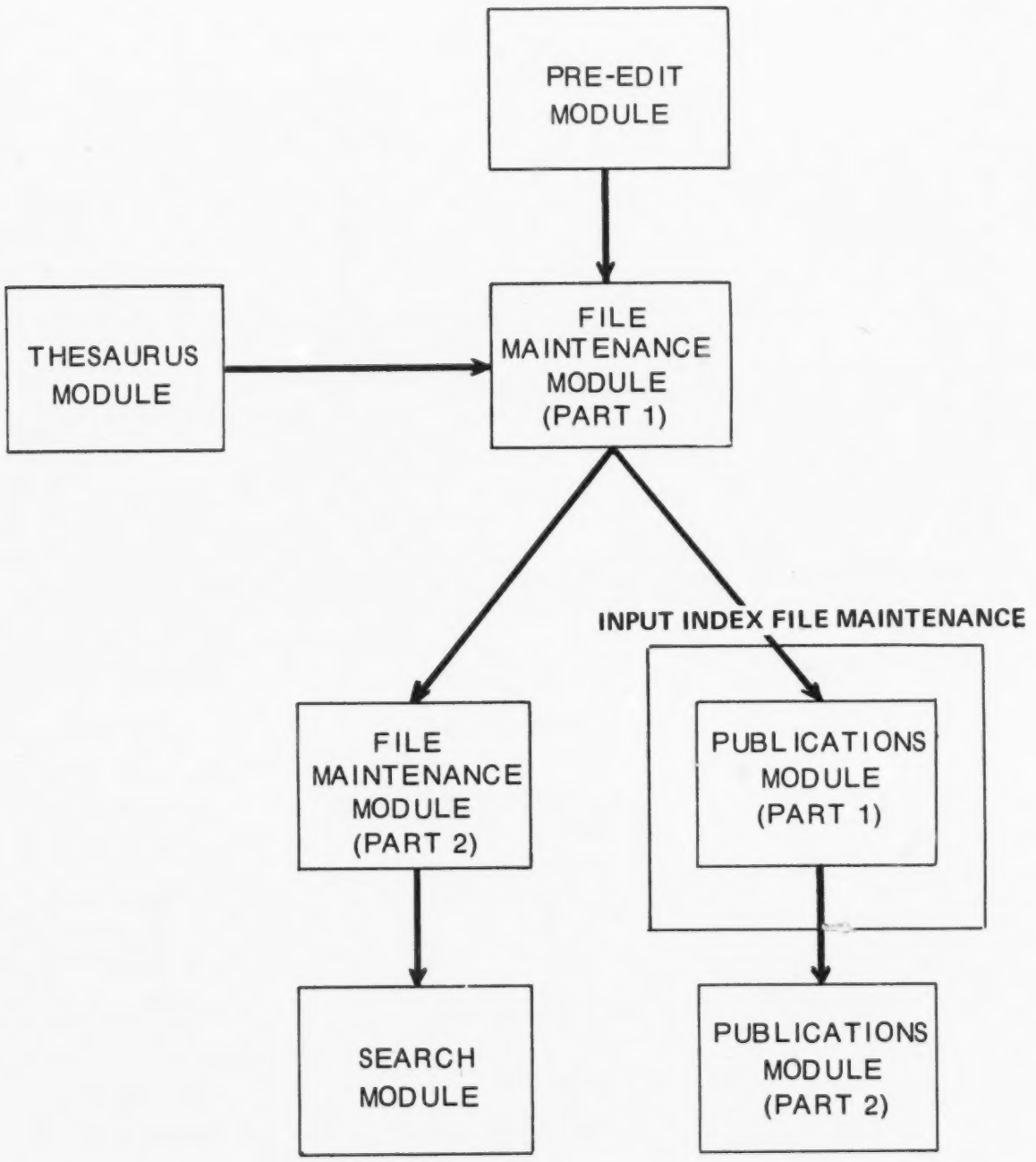


Figure 36

INPUT INDEX PRODUCTION

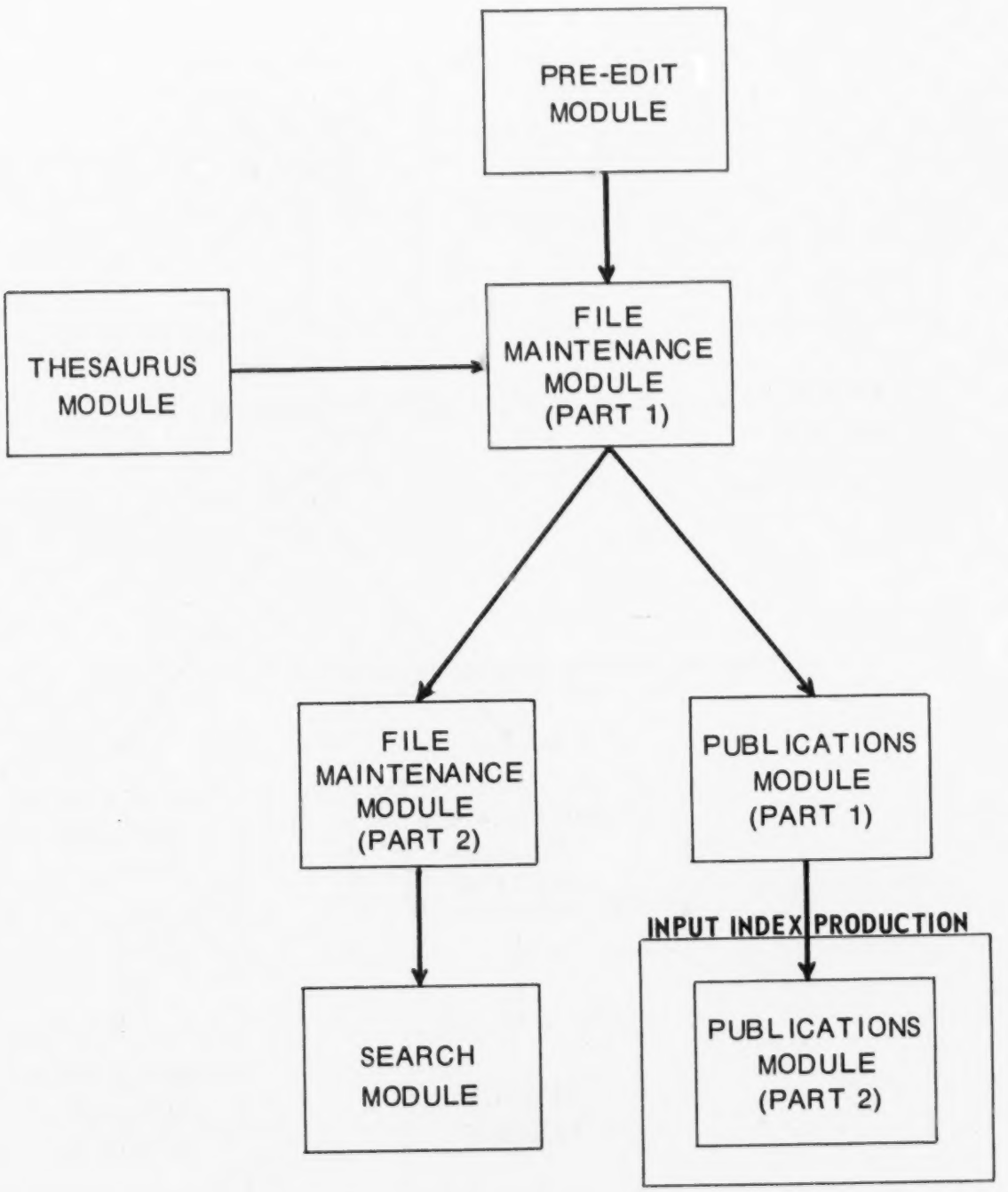


Figure 37

RETRIEVAL REPORT FILE MAINTENANCE

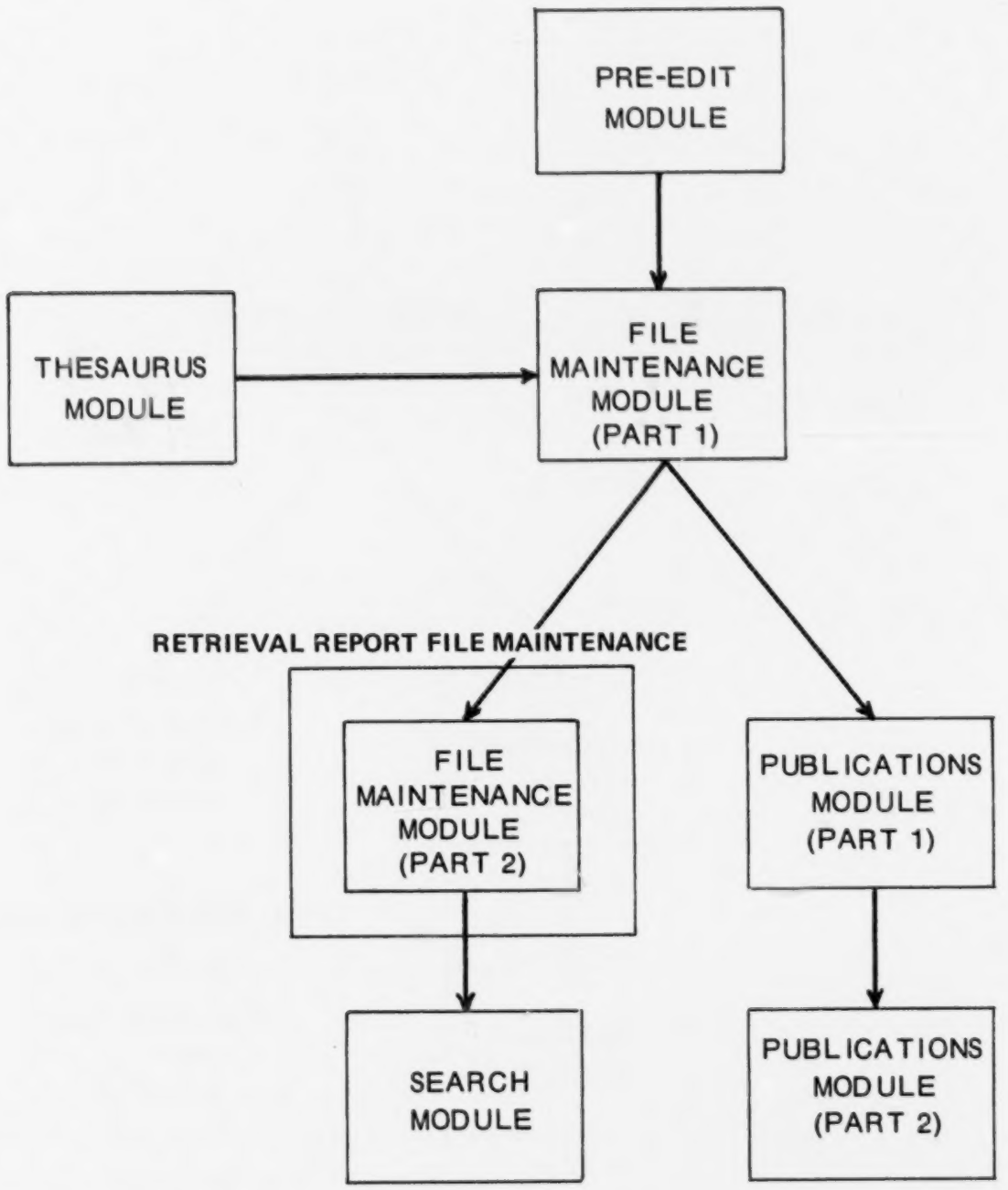


Figure 38

RETRIEVAL REPORT PRODUCTION

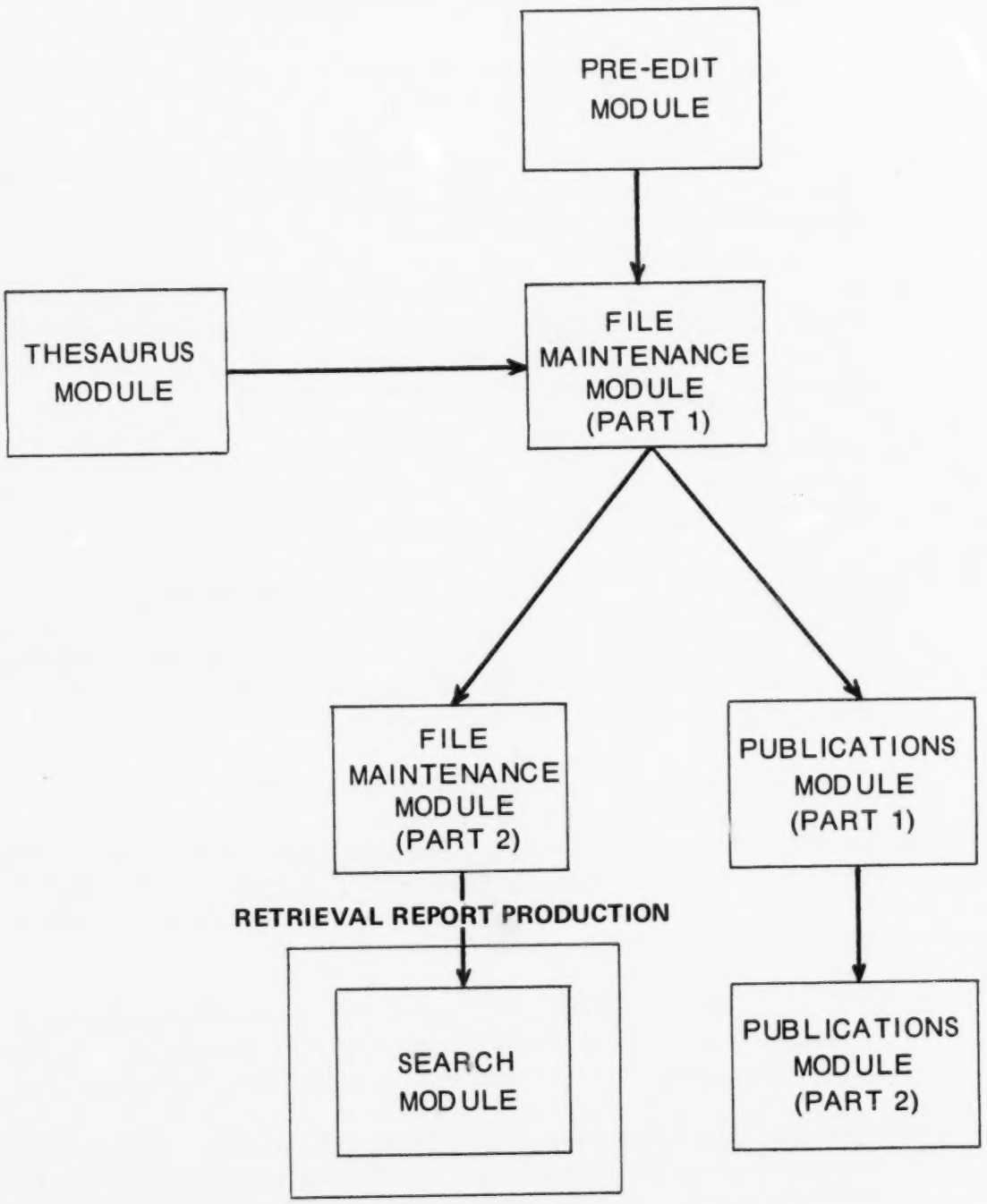


Figure 39

BIBLIOGRAPHY

American Library Assn. *Anglo-American cataloging rules.* Chicago 1967.

Atomic Energy Commission. Division of Technical Information. *Descriptive cataloging guide.* CFSTI, July, 1966. (TID-4577 (Rev.2)).

Committee on Scientific and Technical Information (COSATI). *Standard for descriptive cataloging of government scientific and technical reports.* Revision no. 1, October, 1966. CFSTI, 1966. (AD 64192 PB 173314)

DAVI Task Force on Computerized Cataloging and Booking of Educational Media, 1966-67. Group II of Coding of Materials. *Coding standards for computerized cataloging and scheduling of educational media,* by Charles M. Bidwell. Syracuse Univ. Center for Instructional Communications, June, 1967.

International Atomic Energy Agency. Division of Scientific and Technical Information. *Coding and structuring input data for the Generalized Information Processing System (GIPSY),* by T.W. Scott. Vienna, 1967. (Effective date 10 May, 1967).

Library Assn. *Anglo-American cataloging rules.* London, 1968. (British text)

Library of Congress. Information Systems Office. *The MARC II Format. A communications format for bibliographic data,* by Henriette D. Avram, Knapp, and Lucia J. Rather. GPO. 1968 (Preliminary edition, 1967)

_____. Supplement one. 1968. Preliminary edition.

Massachusetts Institute of Technology. Project Intrex. *Cataloging manual,* by Alan R. Benefeld, Elizabeth J. Gurley and Jane E. Rust. February, 1967. ESL-TM-303. (MIT. Dept. of Electrical Engineering. Electric Systems Laboratory. Augmented Catalog Input Group. Technical Memorandum.)

_____. *Data encoding for the Project Intrex augumented catalog experiments,* by Alan R. Benefeld. 1967. Illustrations to accompany the presentation to the Am. Doc. Institute Convention, User discussion Group IX, 10-25-67.

United States of America Standards Institute. Sectional Committee on Library Works and Documentation (Z-39) Subcommittee on Machine Input Records. (SC-2). *The identification of data elements in bibliographic records.* Final report of the Special Project on Data Elements. 1967. (Z-39SC2 (1967)).

_____. *Proposed American standard for a formal for the communication of bibliographic information in digital form.* 1968. (Z-39SC2 (1968(2)).

APPENDIX/THESAURUS

Introduction

Function

URBANDOC's Thesaurus contains those terms which were considered suitable for the analysis and retrieval of documents in the Demonstration Project. The list reflects the scope of the particular project as agreed upon by the Department of Housing and Urban Development and the local sponsors, The City University of New York and the New York City Planning Commission in mid-1965. It by no means provides all the terms that might be needed by another urban information system.

This listing displays the machine-readable URBANDOC Thesaurus as it was maintained on magnetic tape. It indicates the status of the terminology at the time of the last up-date (May 1969) just prior to the last input to the bibliographic data base. An earlier version (May 1967) was published in a field-test edition described in the *Demonstration Report.* The changes that occurred during the intervening two-year period resulted from project experience with approximately 4,300 additional documents. Another thousand documents would have resulted in a still different "final" Thesaurus, with newer descriptors added, and others deleted or revised as to their cross-references.

For more information on the conceptual development of the URBANDOC Thesaurus, the reader is referred to relevant sections in Chapters III and V of the *Demonstration Report.* For more information on the practical use of the terminology at both input and output, Chapters IV and V of this volume should be consulted. The systems aspects of the Thesaurus are discussed in Chapter VI of this volume, and also Chapters II and VII of the *Operations Manual.* In summary, the printed Thesaurus is basically a manual tool used by the indexer for document analysis, and by the inquirer for phrasing a search statement. The various cross-references are only for these manual usages.

Non-Subject Terms

Some of the terms listed in the Thesaurus may, on close examination, appear to have little reason for inclusion. This applies to DATES, GEO, LIBRARY, SERIAL TITLES, etc. Their function in the system relates to publication and retrieval strategies that are not directly connected with subject analysis. For programming reasons they must be on the Thesaurus File. (It was not feasible to suppress them from the present print-out.) However, they should be ignored in any examination of the Thesaurus in terms of its subject approach.

Conversely, the absence of other terms may seem inconsistent with some of the more obvious retrieval needs of URBANDOC. Foremost among these would be geographic identifiers. Such information is being handled via numeric codes adapted from the Census Bureau. The necessary descriptors and cross-references are segregated on the geographic section of the Thesaurus File, and were not included in this printing.

There would also appear to be a need for a method to identify and retrieve according to types of issuing agencies. This information is part of the URBANDOC system, but has

been incorporated into the document numbers by means of a prefix code. The levels of government and their branches are identified, as are quasi-governmental and metropolitan agencies. The directions for compiling document numbers and for using them as descriptors are included in this manual.

Listings

The Thesaurus terms are presented in two separate listings. The first section alphabetically lists both the valid terms for indexing together with those for which a substitute is provided. It also has the various cross-references and scope notes designed to guide the indexers. In addition, it shows some sympols required for the systems tape.

The second listing is the Permuted Thesaurus. It allows the user to browse, or to look for a term without knowing the actual wording of a multiword descriptor. In the first listing, it is necessary to know the exact form of a term to find it, or at least to know its first word. For example: COMPREHENSIVE PLANNING; SURVEY, PLANNING APPLIC; TRANSPORTATION PLANNING. each appears only once in alphabetic order by its first word. In the Permuted Thesaurus, these descriptors would appear in the following order:

SURVEY, PLANNING	APPLIC
	COMPREHENSIVE PLANNING
COMPREHENSIVE	PLANNING
SURVEY,	PLANNING APPLIC
TRANSPORTATION	PLANNING
	SURVEY, PLANNING APPLIC
	TRANSPORTATION PLANNING

All terms which are valid to the system for input and search – the majority of those on the file – are processed through a program which creates one entry for each word in a multi-word term. The Permuted Thesaurus is specifically a manual tool to assist users of the system.

In addition to the two vocabulary listings presented in this publication, the URBANDOC staff had available listings of the Inverted File created by the computer to fulfill the requirements of the search program. In them, each term appears the number of times it has been used, the last date on which it was used, and the document numbers for which it had been used.

Terms and Symbols used in the Hard-Copy Thesaurus

D	Term Usage	Appears in the left margin to indicate entry is a descriptor.
S	Term Usage	Appears in the left margin to indicate entry is a subdescriptor.
B	Term Usage	Appears in the left margin to indicate entry may be used as either a descriptor or a subdescriptor.

At the present, only 'B' and 'S' are being used. All 'B' entries are being used only as descriptors. The programming system allows for a 'B' to be used in either way, but the project has limited itself to only a descriptor usage.

*	Pre-code	Precedes all descriptors indicating its search status. A subdescriptor is not preceded by any code.
USE	Substitute Section	The word 'USE' indicates that the term following is to be used in place of the entry. This is a *see* reference.

*ACCIDENTS — Do not use ACCIDENTS.
USE *SAFETY — Use instead the term SAFETY.

F	Used For Section	The word following 'F' is a synonym, which has been replaced for searching by the preferred term.
U	Up-post Term	Term, broader in meaning, to which the entry could be up-posted.
D	Down-post Term	Term, narrower in meaning, to which the entry could be down-posted.
C	Co-ordinate Term	Term which is to be considered for co-ordination between the named descriptor and the entry.
M	Modifying Term	Subdescriptor which is to be considered for modification of the entry.

*COMPENSATORY EDUCATION
M–AFTER–SCHOOL

O	Opposite Term	Term which has the opposite meaning of the entry, used infrequently.
P	Prohibited Entry	Use of the entry is prohibited with the named descriptor or subdescriptor, used infrequently.
R	Related Term	This is a descriptor related to the entry.
S	Modifying Term	This is a descriptor listed under a subdescriptor entry to show modification. It shows in reverse the use of the symbol 'M'.

AFTER–SCHOOL
S – COMPENSATORY EDUCATION

In making use of the URBANDOC Thesaurus, the reader should remember that the Thesaurus, in its present form, serves to assist in the processing of documents for input into the computer. The Thesaurus functions as an authority and a guide to the document analyst and provides the basis for machine query. Under each entry is gathered all relevant terms which reflect the scope and relationships of the entry.

S *ABATEMENT
S SOUND
S WATER POLLUTION
S NUISANCES
B *ABSTRACTS
U FORMATS
B *ACCESS
U URBAN FORM
C CBD
C HIGHWAYS
R DESIGN
B *ACCESSORY USES
D SERVICE STATIONS
D VENDING MACHINES
B *ACCIDENTS
USE *SAFETY
B *ACCOUNTING
R COSTING
R REPORTING
R RENEWAL EXECUTION
C RENEWAL FUNDS
B *ACCOUNTS
USE *REGIONAL ACCOUNTS
B *ACOUSTICS
USE *SOUND
B *ACQUISITION APPRAISALS
U RENEWAL PLANNING
R APPRAISAL
R LAND ACQUISITION
USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B *ACQUISITION OF LAND
USE *LAND ACQUISITION
B *ACQUISITION OF STRUCTURE
USE *STRUCTURE ACQUISITION
APPLIES TO THE ACQUISITION OF BUILDINGS OR OTHER STRUCTURES ALONE, IN THOSE CASES WHERE LAND IS NOT ACQUIRED. IF THE LAND ALONE OR LAND PLUS IMPROVEMENTS IS INVOLVED, USE LAND ACQUISITION.
B *ACQUISITIONS LISTS
U FORMATS (CONT B)
R PUBLICATIONS LISTS
REFERENCE TOOL. LISTS PUBLICATIONS OF A NUMBER OF AGENCIES OR POLITICAL JURISDICTIONS
B *ACREAGE
B *ACTION PROGRAMS
F COMMUNITY ACTION PROGRAMS
U SOCIAL PLANNING
R POVERTY PROGRAMS
COMMUNITY-SPONSORED
B *ACTIVITY
M ECONOMIC
M SOCIAL
HAPPENINGS
B *ADAPTIVE USES
USE *CONVERSIONS
B *ADMINISTRATION
D PLANNING ADMINISTRATION
D ADMINISTRATIVE ORGANIZATION
D AGENCIES
P SCHOOLS
R ADMINISTRATIVE LAW
USE AS BOTH DESCRIPTOR AND MODIFIER
B *ADMINISTRATIVE LAW

F REGULATIONS
U LAW, LAWS
D CODE ENFORCEMENT
R ZONING ADMINISTRATION
R ADMINISTRATION
INCLUDES RULINGS AND PROCEDURAL REQUIREMENTS OF ALL ADMINISTRATIVE AND REGULATORY BODIES.

B *ADMINISTRATIVE ORGANIZATION
U ADMINISTRATION
D STAFF
R PLANNING ADMINISTRATION
C AGENCIES
THE ORGANIZATION WITHIN THE AGENCY

B *ADULT EDUCATION
U EDUCATION
R CAREER DEVELOPMENT

B *ADVERTISING
USE *SIGNS, BILLBOARDS

B *ADVOCACY PLANNING
U SOCIAL PLANNING
R POLITICS
R CITIZEN PARTICIPATION

S AERIAL
USED TO MODIFY PHOTOGRAPHY, ETC.

B *AERIAL PHOTOGRAPHY

B *AESTHETICS
D URBAN DESIGN
D ARCHITECTURE
D ARCHITECTURAL CONTROLS
D ART
D BEAUTIFICATION
D COLOR
D DESIGN
D TEXTURE

S AFTER-SCHOOL
S COMPENSATORY EDUCATION
S EDUCATION
S CHILD CARE

B *AGE

B *AGED
USE *ELDERLY

B *AGENCIES
U PLANNING ADMINISTRATION
U ADMINISTRATION
D ART COMMISSIONS
D LPA
D PLANNING COMMISSIONS
M REGULATORY
M FEDERAL
M STATE
M MUNICIPAL
M REGIONAL
M COUNTY
C ADMINISTRATIVE ORGANIZATION
USE FOR MATERIALS INVOLVING A DISCUSSION OF THE VARIOUS AGENCIES CONCERNED WITH THE ADMINISTRATION OF A PARTICULAR PROGRAM.

B *AGENCY ENTRY
USE TERM WHEN ENTERING AN AGENCY TITLE AND ADDRESS FOR DIRECTORY INFORMATION.

B *AGORA
USE *CENTRES

B *AGRICULTURAL ACTIVITIES
U RESOURCE PRODUCTION
INCLUDES AGRICULTURALLY - RELATED ACTIVITIES

B *AGRICULTURE
U RESOURCE PRODUCTION

U LAND USE
D FARMS
R SOILS
R FOOD SUPPLY

B *AIR CONDITIONING
USE *THERMAL CONTROLS

B *AIR LINES
U AIR TRANSPORT
U TRANSPORT SYSTEMS

B *AIR POLLUTION
U ENVIRONMENTAL PROTECTION
U NUISANCES
D SMOKE
D SMOG
R INDUSTRIAL WASTE
P CONTROLS
USE ONLY FOR DISCUSSIONS OF POLLUTANTS, FOR DISCUSSIONS OF CONTROL, USE AIR RESOURCES.

B *AIR RESOURCES
F CLEAN AIR
U NATURAL RESOURCES
USE FOR DISCUSSIONS OF CONTROL AND MANAGEMENT. USE AIR POLLUTION FOR DISCUSSION OF POLLUTANTS

B *AIR RESOURCES PLANS
U COMPREHENSIVE PLANS

B *AIR RIGHTS
U LAND RESOURCES
R ELEVATED CONSTRUCTION
R AIR RIGHTS PROJECTS
REFERS TO THE UTILIZATION OF THE AIR SPACE ABOVE EXISTING LAND DEVELOPMENT CREATING, IN EFFECT, ADDITIONAL LAND

B *AIR RIGHTS PROJECTS
R AIR RIGHTS
R DEVELOPMENTS

B *AIR TRAFFIC
U AIR TRANSPORT

B *AIR TRANSPORT
U TRANSPORTATION
D AIR-GROUND TRANSPORT
D AIR LINES
D AIR TRAFFIC
D AIRCRAFT

B *AIR-CUSHIONED VEHICLES
F HOVERCRAFT
U VEHICLES
D HYDROFOILS

B *AIR-GROUND TRANSPORT
U AIR TRANSPORT
COVERS ALL TRANSPORTATION FROM THE AIRPORT TO THE DESTINATION

B *AIRCRAFT
U AIR TRANSPORT
U VEHICLES
D VERTICAL RISE AIRCRAFT

B *AIRPORT PLANNING
R TRANSPORTATION PLANNING
R AIRPORTS

B *AIRPORTS
U TERMINALS
U COMMUNITY FACILITIES
D HELIPORTS
R AIRPORT PLANNING

B *ALERTING
USE *MONITORING

B *ALLEYS
U STREETS

U BLOCK INTERIORS
S ALLOCATION
S MANPOWER
S FINANCIAL SOURCES
S NATURAL RESOURCES
S RESOURCES
S WATER RESOURCES
S TAX REVENUES
P WATER
B *ALMANACS
USE *YEAR BOOKS, ALMANACS
B *ALTERATIONS
U CONFORMANCE
REFERS TO ALTERATIONS OF STRUCTURES AS AFFECTING COMPLIANCE TO THE ZONING ORDINANCE.
B *ALTERNATIVES
U PLANNING PROCESS
R SKETCH PLANS
S AMENDMENTS
B *AMENITIES
R STREET FURNITURE
B *AMORTIZATION
U MORTGAGE FINANCING
U TIME ZONING
R EQUITY
R MORTGAGES
C CONFORMANCE
C MORTGAGES
B *AMUSEMENT AREAS
F FAIRGROUNDS
U ASSEMBLY PLACES
R RESORTS
INCLUDES AMUSEMENT PARKS, PENNY ARCADES, MINIATURE GOLF, RACE TRACKS, & SIMILAR PLACES AND RELATED ACTIVITIES
B *ANALYTIC TECHNIQUE
F MULTIPLIER ANALYSIS
D MATHEMATICAL ANALYSIS
D MATRIX
B *ANIMAL LIFE
USE *ECOLOGY
B *ANNEXATION
U MUNICIPAL GOVERNMENT
S ANNUAL
F YEARLY
B *ANTI-POVERTY COUNCILS
B *ANTI-POVERTY PROGRAMS
USE *POVERTY PROGRAMS
B *APARTMENTS
U BUILDINGS/RESIDENTIAL
U MULTIPLE DWELLINGS
M MODEL
M OWNER-BUILT
R GARDEN APARTMENTS
INCLUDES BOTH INDIVIDUAL APARTMENTS AND THE APARTMENT BUILDING
B *APPAREL, RELATED PRODUCTS
U MANUFACTURING
B *APPEALS
U PROCEDURES
R NON-CONFORMANCE
B *APPELLATE PROCEDURE
USE *JUDICIAL REVIEW
B *APPLICATIONS
U PROCEDURES

INCLUDES RE-APPLICATIONS
B *APPORTIONMENT
U VOTING
B *APPRAISAL
U LAND VALUES
U VALUATION
R ACQUISITION APPRAISALS
R REUSE APPRAISALS
R SPECIAL APPRAISALS
C LAND ACQUISITION
C REUSE
R USE VALUE
PROFESSIONAL JUDGEMENT ON ALL TYPES OF PROPERTY
B *APPRENTICESHIP PROGRAMS
U CAREER DEVELOPMENT
B *APPROPRIATIONS
B *AQUARIUMS
U NATURE EXHIBITS
B *ARCADES
U STREETS
R MALLS
R PLAZAS
B *ARCHES
USE *ARCHITECTURAL FEATURES
B *ARCHITECTS
U ARCHITECTURE
B *ARCHITECTURAL CONTROLS
U LAND USE CONTROLS
U AESTHETICS
U URBAN DESIGN
B *ARCHITECTURAL DESIGN
U ARCHITECTURE
R BUILDING TECHNOLOGY
R SITE PLANNING
THE STUDY OF SPACE USES, ESPECIALLY IN TERMS OF BUILDINGS
B *ARCHITECTURAL DRAWINGS
B *ARCHITECTURAL FEATURES
F ARCHES
U ARCHITECTURE
D ROOFS, ROOFING
D TERRACES
B *ARCHITECTURAL LANDMARKS
USE *LANDMARKS
B *ARCHITECTURAL MECHANICS
USE *BUILDING EQUIPMENT
B *ARCHITECTURE
U AESTHETICS
U ENVIRONMENTAL DESIGN
U URBAN DESIGN
D ARCHITECTURAL FEATURES
D ARCHITECTS
D ARCHITECTURAL DESIGN
D BUILDING TECHNOLOGY
D FLOORSCAPE
C RESTORATION
R DESIGN
R LANDSCAPE ARCHITECTURE
R URBAN PLANNING
R BUILDING EQUIPMENT
R VISUAL ELEMENTS
THE DISCIPLINE
B *ARCHIVES
B *AREA DEVELOPMENT
USE *ECONOMIC DEVELOPMENT
B *AREA MEASUREMENT
R MAPPING

B *AREA SERVICES PROGRAMS
B *AREAL ANALYSIS
USE *REGIONAL SCIENCE
B *ARENAS, STADIA
U ASSEMBLY PLACES
EXTENDS TO FIELD HOUSES
B *ARMED SERVICES
USE *DEFENSE
B *ART
U AESTHETICS
D MONUMENTS
D MURALS, DECORATIONS
D GRAPHIC ARTS
D SCULPTURE
N PUBLIC
B *ART COMMISSIONS
U AGENCIES
B *ART GALLERIES
USE *GRAPHIC ARTS
S ARTERIAL
S HIGHWAYS
S STREETS
B *ARTICLES
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
USE FOR CHAPTERS WITHIN A MONOGRAPH AND PAPERS IN
CONFERENCE PROCEEDINGS
B *ARTISTS
USE *ARTISTS QUARTERS
B *ARTISTS QUARTERS
F ARTISTS
R LOFTS
B *ASSEMBLY PLACES
F PUBLIC ASSEMBLY
U PUBLIC BUILDINGS
D AMUSEMENT AREAS
D AUDITORIUMS
D ARENAS, STADIA
D THEATERS
D EXHIBITION HALLS
D ENTERTAINMENT
D RACE TRACKS
D RELIGIOUS ACTIVITIES
D SPORTS ACTIVITIES
B *ASSESSED VALUE
USE *TAX BASE
B *ASSESSMENT
U LAND VALUES
D EQUALIZATION RATE
R TAX BASE
R TAXATION
USE FOR THE PROCESS OF ESTABLISHING VALUES
AS DISTINGUISHED FROM THE VALUES THEMSELVES, WHICH
CONSTITUTE THE TAX BASE
B *ASSOCIATIONS
D COMMUNITY ORGANIZATIONS
B *ATHLETIC FIELDS
USE *PLAYFIELDS
B *ATLASES
U MAPS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE
B *ATTACHED HOUSES
U BUILDINGS/RESIDENTIAL
D GARDEN APARTMENTS
D PATIO HOUSES
D ROW HOUSES

```
        D  TOWN HOUSES
        R  HOUSES
        REFERS TO THE BUILDING TYPE, INCLUDING THOSE THAT
        ARE SEMI-DETACHED
B  *ATTITUDES
    USE  *MORES
B  *AUDITORIUMS
        U  ASSEMBLY PLACES
B  *AUTHORITIES
        F  PUBLIC AUTHORITIES
        U  PUBLIC ADMINISTRATION
        R  SPECIAL DISTRICTS
B  *AUTOMATION
        INVOLVES THE IMPACT, NOT INFORMATION SCIENCE
B  *AUTOMOBILE GRAVEYARDS
    USE  *JUNK YARDS
B  *AUTOMOBILES
        F  DRIVING
        U  VEHICLES
        M  ELECTRIC
B  *AWARDS, COMPETITIONS
B  *AWNINGS
    USE  *OVERHANG
B  *BANKS, BANKING
        U  FINANCE
        R  BUILDING AND LOAN ASSOCIATIONS
        R  SAVINGS BANKS
B  *BASE MAPS
        U  MAPS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE
B  *BASEMENTS, FOUNDATIONS
        U  BUILDINGS
B  *BATHROOMS
        U  ROOMS
B  *BEACHES
        U  WATERFRONTS
        U  RECREATIONAL FACILITIES
        R  SWIMMING
B  *BEAUTIFICATION
        F  URBAN BEAUTIFICATION
        U  AESTHETICS
        U  URBAN DESIGN
        R  VISUAL ELEMENTS
        R  ROADSIDES
B  *BEAUTIFICATION ASSIST
B  *BEDROOMS
        U  ROOMS
B  *BEHAVIOR
    USE  *MORES
B  *BEHAVIORAL SCIENCES
        D  PSYCHOLOGY
        D  SOCIOLOGY
        D  EKISTICS
B  *BENEFITS
        R  COSTS
B  *BEST USE
        F  HIGHEST USE
        U  LAND USE
        U  LAND VALUES
        REFERS TO ALL DISCUSSIONS OF EITHER BEST OR HIGHEST
        USE, WHETHER IN ECONOMIC OR SOCIAL TERMS
B  *BIBLIOGRAPHY
        U  FORMATS
        D  CATALOGS
        D  CHECKLISTS
        USE ONLY IF SUBSTANTIAL OR UNIQUE. ENTER UNDER FORMAT ANALYSIS
```

WHERE APPLICABLE

B *BICYCLING

B *BIDS, BIDDING
U CONTRACTS

B *BIOGRAPHY
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE

B *BIOLOGICAL SCIENCES

B *BLIGHT
F GREY AREAS
R DEPRESSED AREAS
R SLUMS
FOR DISCUSSIONS ON THE PROCESS OF BLIGHT

B *BLOCK INTERIORS
U BLOCKS
U OPEN SPACE
D ALLEYS

B *BLOCKBUSTING
U OPEN HOUSING

B *BLOCKS
U STREETS
D BLOCK INTERIORS
D LOTS, PARCELS
D SUPERBLOCKS

B *BLUE COLLAR CLASS
USE *WORKING CLASS

B *BOARDING HOUSES
USE *ROOMS, ROOMING HOUSES

B *BOATING
U OUTDOOR RECREATION
D MARINAS

B *BOND ISSUES

B *BONDED DEBT
USE *DEBT

B *BONDS
U FINANCIAL SOURCES
U REVENUES

B *BOTANICAL FEATURES
F PLANT LIFE
U NATURAL RESOURCES
R LANDSCAPE ARCHITECTURE
REFERS MAINLY TO PLANT LIFE IN ITS NATURAL STATE,
INCLUDING WOODED AREAS

B *BOTANICAL GARDENS, ARBORETUMS
U NATURE EXHIBITS

B *BOULEVARDS
USE *STREETS

B *BOUNDARIES

B *BRICK CONSTRUCTION
U BUILDING TECHNOLOGY

B *BRIDGES
U CROSSINGS
U STRUCTURES

B *BRIEFS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE

B *BROCHURES
F PAMPHLETS
U FORMATS
C CITIZEN PARTICIPATION
C SPONSORS
C DEVELOPERS
FOR INFORMATIVE MATERIALS DESIGNED TO ENCOURAGE THE
PARTICIPATION OF CITIZEN GROUPS OR THE BUSINESS
COMMUNITY IN ANY OF THE RENEWAL, ETC. PROGRAMS.

B *BROWNSTONES
R TOWNHOUSES

B *BUDGETS
INCLUDES BUDGETING
B *BUFFER STRIPS
U ZONING REQUIREMENTS
B *BUILDING AND LOAN ASSOCIATIONS
R BANKS, BANKING
R MORTGAGE FINANCING
R SAVINGS BANKS
B *BUILDING CODES
U CODES
B *BUILDING CONDITIONS
F HOUSING CONDITIONS
D DETERIORATION
D DILAPIDATION
D OBSOLESCENCE
D PESTS
D PROPERTY IMPROVEMENT
R CODES
B *BUILDING CYCLES
B *BUILDING EQUIPMENT
F ARCHITECTURAL MECHANICS
U ARCHITECTURE
D FIRE ESCAPES
D ILLUMINATION
D ELEVATORS
D PLUMBING
D THERMAL CONTROLS
B *BUILDING INDUSTRY
M SPECULATIVE
REFERS PRIMARILY TO RESIDENTIAL, COMMERCIAL + LIGHT INDUSTRIAL BUILDINGS AS OPPOSED TO HIGHWAYS, ETC COVERED BY CONSTRUCTION INDUSTRY
B *BUILDING LINE
U ZONING REQUIREMENTS
U LOTS, PARCELS
B *BUILDING MAINTENANCE
USE *PROPERTY MANAGEMENT
B *BUILDING PERMITS
U ZONING ADMINISTRATION
B *BUILDING SITES
D FRONTAGE
B *BUILDING SOCIETIES
U SPONSORS
B *BUILDING TECHNOLOGY
F MATERIALS
F CONSTRUCTION PROCEDURES
F INSTANT REHAB
U ARCHITECTURE
U TECHNOLOGY
D INSULATION
D MODULAR COORDINATION
D BRICK CONSTRUCTION
D CONCRETE CONSTRUCTION
D PREFABRICATION
D WOOD CONSTRUCTION
D FIRE PREVENTION
D STEEL CONSTRUCTION
D STRUCTURAL ENGINEERING
B *BUILDING TECHNOLOGY (CONT)
R PIGGY-BACK HOUSING
R TEMPORARY HOUSING
C REHABILITATION
C RESEARCH
INCLUDES BUILDING MATERIALS + CONSTRUCTION TECHNIQUES. WHEN COORDINATED WITH REHABILITATION, INCLUDES THE MEANING OF INSTANT HOUSING AND INSTANT REHAB.

B *BUILDING TRADES
U TRADE UNIONS
B *BUILDING, HOUSING CODES
USE *CODES
B *BUILDINGS
U DEVELOPMENTS
U STRUCTURES
D OVERHANG
D BASEMENTS, FOUNDATIONS
D ROOFS, ROOFING
D ROOMS
D WALLS
D MEGASTRUCTURES
M FLEXIBLE
B *BUILDINGS (CONT)
M COMMERCIAL
M INDUSTRIAL
M MULTI-PURPOSE
M RESIDENTIAL
M OWNER-BUILT
C SALES
R SUPERSTRUCTURE
EXCLUDES ASSEMBLY PLACES, COMMUNITY FACILITIES,
EDUCATIONAL FACILITIES, ALL OF WHICH ARE RELATED TERMS
B *BUILDINGS/COMMERCIAL
USE *BUILDINGS
D EATING, DRINKING PLACES
D MARKETS
D OFFICES
D STORES
D WAREHOUSES
FULL SUBSTITUTION BUILDINGS/COMMERCIAL
B *BUILDINGS/INDUSTRIAL
USE *BUILDINGS
D FACTORIES
FULL SUBSTITUTION BUILDINGS/INDUSTRIAL
B *BUILDINGS/MULTI-PURPOSE
USE *BUILDINGS
D LOFTS
FULL SUBSTITUTION BUILDINGS/MULTI-PURPOSE
B *BUILDINGS/RESIDENTIAL
USE *BUILDINGS
D APARTMENTS
D HOUSES
D MULTIPLE DWELLINGS
D ATTACHED HOUSES
FULL SUBSTITUTION BUILDINGS/RESIDENTIAL
B *BUILT-UP AREAS
F DEVELOPED AREAS
R DENSITY
INCLUDES DEVELOPED AREAS
B *BULK
USE *BULK, HEIGHT
B *BULK, HEIGHT
F BULK
F HEIGHT
U ZONING REQUIREMENTS
R SCALE
B *BUS-RAIL SYSTEMS
U TRANSPORT SYSTEMS
B *BUSES
U RAPID TRANSIT
U TRANSPORT SYSTEMS
U VEHICLES
B *BUSINESS
F TRADE
U ECONOMIC BASE

```
        U  COMMERCE
        D  RETAIL TRADE
        D  SERVICE TRADE
        D  WHOLESALE TRADE
        D  SMALL BUSINESS
        D  REAL ESTATE BUSINESS
        D  TOURISM
        D  BUSINESS CONCERNS
        C  SALES
        TO BE USED AS A NOUN RATHER THAN AS AN ADJECTIVE
        COVERS RETAIL, WHOLESALE AND THE SERVICE TRADES
B  *BUSINESS AREAS
    USE  *COMMERCIAL AREAS
B  *BUSINESS CONCERNS
        U  BUSINESS
        R  SMALL BUSINESS
B  *BUSINESS CYCLES
        U  ECONOMIC CONDITIONS
B  *BUSINESS IMPROVEMENT
        R  SMALL BUSINESS
        R  REVITALIZATION
        R  COMMUNITY DEVELOPMENT
        REFERS TO FINANCIAL ASSISTANCE TO BUSINESS
B  *BUSING
    USE  *PUPIL TRANSPORT
S   BY CITY
        TO INDICATE TABULAR INFORMATION SO ORGANIZED
S   BY COUNTY
        TO INDICATE TABULAR INFORMATION SO ORGANIZED.
S   BY STATE
        TO INDICATE TABULAR INFORMATION SO ORGANIZED.
B  *BY-PASS
        R  HIGHWAYS
B  *CAMPS, CAMPING
        U  OUTDOOR RECREATION
        INCLUDES CAMP + PICNIC AREAS, DAY CAMPS  BOTH
        LOCATION AND ACTIVITIES
B  *CAMPUS PLANNING
        U  EDUCATIONAL FACILITIES
        R  COLLEGES, UNIVERSITIES
        R  COLLEGE HOUSING
B  *CANALS
        U  WATERWAYS
B  *CAPITAL
B  *CAPITAL BUDGETS
        R  CAPITAL IMPROVEMENTS
B  *CAPITAL CITIES
        F  CAPITOLS
        U  CITIES, TOWNS
        R  CENTRAL CITY
        PARTICULARLY APPLICABLE TO NON-CENTRAL CITIES THAT
        FUNCTION AS GOVERNMENT CENTERS
B  *CAPITAL GRANT
    USE  *GRANTS
B  *CAPITAL GRANT APPLIC
        U  RENEWAL PLANNING
        M  PART I
        M  PART II
        USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE
        LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE.
B  *CAPITAL IMPROVEMENT PROGRAMS
    USE  *CIP
        AS OF MARCH 1969, THIS TERM NO LONGER IN USE NOR ITS
        SUBSTITUTE CIP.
B  *CAPITAL IMPROVEMENTS
        R  CAPITAL BUDGETS
B  *CAPITALIZATION
```

B *CAPITOLS
USE *CAPITAL CITIES
B *CAREER DEVELOPMENT
F TRAINING//RETRAINING
U SOCIAL PLANNING
U LABOR
D APPRENTICESHIP PROGRAMS
D IN-SERVICE TRAINING
R MANPOWER
R POVERTY PROGRAMS
R ADULT EDUCATION
R TRAINING PROGRAMS
R SOCIAL RENEWAL
B *CARGO
USE *FREIGHT
B *CARRIERS
USE *TRANSPORT SYSTEMS
B *CASE STUDIES
B *CATALOGING
U LIBRARY SERVICE
B *CATALOGS
U BIBLIOGRAPHY
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE
B *CBD
F CENTRAL BUSINESS DISTRICT
F DOWNTOWNS
U COMMERCIAL AREAS
D CBD DESIGN
C ACCESS
C REVITALIZATION
R TRADE CENTERS
R CENTRES
R RETAIL SALES
B *CBD DESIGN
U CBD
B *CEMETERIES
B *CENSUS
U DATA
B *CENSUS PLANNING
B *CENSUS TRACTS
B *CENTER FOR URBAN EDUCATION LIBRARY
USE *CUE LIBRARY
B *CENTERS
F HUBS
F COMPLEXES
R CORE
R DEVELOPMENTS
CONSIDER MODIFICATION BY COMMERCIAL AND COORDINATION WITH TRANSPORTATION, GOVERNMENT, POPULATION. DO NOT CONFUSE WITH COMMUNITY CENTERS, CBD, CENTRAL CITIES, CENTRAL PLACE STUDIES, CIVIC CENTERS. FOR FUNCTIONAL AREAS, USE CENTRES.
B *CENTRAL BUSINESS DISTRICT
USE *CBD
B *CENTRAL CITY
C REVITALIZATION
R CENTRES
R CAPITAL CITIES
B *CENTRAL PLACE STUDIES
B *CENTRALIZATION
B *CENTRES
F AGORA
F METROTOWNS
U URBAN FORM
U URBAN DESIGN
R CORE

```
        R  CENTRAL CITY
        R  CBD
        R  CIVIC CENTERS
        R  PERFORMING ARTS
        C  LOCATION
        M  DESIGN
        R  DEVELOPMENTS
        M  REGIONAL
        R  NEW TOWNS
        R  DECENTRALIZATION
        R  SATELLITES
B  *CENTRES (CONT)
        USE FOR FUNCTIONAL AREAS.  DO NOT CONFUSE WITH
        CENTERS, WHICH ARE STRUCTURAL.
B  *CERTIFICATION
        U  PROCEDURES
        R  WORKABLE PROGRAM
        INCLUDES RECERTIFICATION.
B  *CFA
        F  COMMUNITY FACILITIES ADMINISTRATION
        U  HUD
        U.S. COMMUNITY FACILITIES ADMINISTRATION
B  *CHARGES
        F  FARES
        F  FEES
        F  RATES
        F  TOLLS
        F  SERVICE CHARGES
        F  TARIFF
        U  REVENUES
        U  FINANCIAL SOURCES
        D  RENTS
        D  USE CHARGES
        R  TRANSPORTATION
B  *CHARTERS
        U  LAW, LAWS
        U  FORMATS
        R  CONSTITUTIONS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B  *CHECKLISTS
        U  BIBLIOGRAPHY
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B  *CHEMICALS, ALLIED PRODUCTS
B  *CHILD CARE
        M  AFTER-SCHOOL
B  *CHILDREN
        U  SPECIAL GROUPS
        R  YOUTH
B  *CHRONICALLY ILL
    USE  *HANDICAPPED
B  *CHURCHES, SYNAGOGUES
        U  RELIGIOUS ACTIVITIES
        INCLUDES THE RELATED INSTITUTIONAL ACTIVITIES
B  *CINEMA
    USE  *PERFORMING ARTS
        INVOLVES THE EXHIBITION OF MOTION PICTURES AS A
        SERIOUS ART FORM.
B  *CIP
        F  CAPITAL IMPROVEMENT PROGRAMS
        SEARCH ON CIP FOR DOCUMENTS INDEXED UNDER THIS TERM
        PRIOR TO MARCH 1969
S   CIRCULAR
        S  URBAN FORM
B  *CIRCULATION
        F  LOCAL TRANSPORTATION
        U  COMPREHENSIVE PLANNING
```

U TRANSPORTATION
D HIGHWAYS
D PEDESTRIANS
D STREETS
D RAPID TRANSIT
D TRAFFIC
D VEHICLES
D PUPIL TRANSPORT
R CIRCULATION ELEMENTS
P PLANS
R PATHS
C PEDESTRIANWAYS
LOCAL TRANSPORTATION SYSTEM, PART OF MOST
COMPREHENSIVE PLANNING STUDIES

B *CIRCULATION ELEMENTS
U LAND USE
D HIGHWAYS
D PARKING
D RAPID TRANSIT
D RIGHT-OF-WAY
D ROADSIDES
D STREETS
D TERMINALS
D CROSSINGS
R CIRCULATION
TO BE USED IN TERMS OF LAND USE CLASSIFICATION ONLY

B *CIRCULATION PLANS
F THOROUGHFARE PLANS
U COMPREHENSIVE PLANS
U PLANS
U TRANSPORTATION PLANNING
C PARKING
C STREETS
C TRAFFIC
USE FOR PLANS THAT COVER ALL OR PART OF THE PLANNING
CONSIDERATIONS LISTED UNDER CIRCULATION, PLUS PARKING.

B *CITIES, TOWNS
D CONURBATION
D MEGALOPOLIS
D METROPOLIS
D CENTRAL CITIES
D SMALLER CITIES
D CAPITAL CITIES

B *CITIES, TOWNS (CONT)
C DYNAMIC PROCESS
C SATELLITES
M GROWTH
M RURAL
P DESIGN
P PLANNING
P VISUAL ELEMENTS
R URBAN PLANNING
P HISTORY
R URBANITY
R URBANIZATION
R URBAN HISTORY
REFERS TO PHYSICAL ENTITY

B *CITIZEN PARTICIPATION
D QUASI-GOVERNMENTAL
R TOWN MEETINGS
M INDUSTRIAL
R WORKABLE PROGRAM
C BROCHURES
R ADVOCACY PLANNING
R TRAINING PROGRAMS
R COMMUNITY COUNCILS

B *CITIZEN PARTICIPATION/INDUSTRIAL

```
        R  INDUSTRY
B  *CITY DIRECTORIES
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B  *CITY MANAGER PLAN
        U  MUNICIPAL GOVERNMENT
        R  COMMISSION PLAN
B  *CITY PLANNING
    USE  *URBAN PLANNING
B  *CITY SIZE
        R  SCALE
B  *CITY SIZE-00
        U.S. DEPT. OF COMMERCE.  BUREAU OF THE CENSUS.
        GEOGRAPHIC IDENTIFICATION SCHEME.
        U.S. CITY WITH POPULATION UNDER 200. AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-01
        U.S. CITY WITH POPULATION OF 200-499, AS IDENTIFIED IN
        1960 CENSUSES.
B  *CITY SIZE-02
        U.S. CITY WITH POPULATION OF 500-999 AS IDENTIFIED IN
        1960 CENSUSES.
B  *CITY SIZE-03
        U.S. CITY WITH POPULATION OF 1,000-1,499 AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-04
        U.S. CITY WITH POPULATION OF 1,500-1,999 AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-05
        U.S. CITY WITH POPULATION OF 2,000-2,499 AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-06
        U.S. CITY WITH POPULATION 2,500-4,999 AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-07
        U.S. CITY WITH POPULATION OF 5,000-9,999 AS IDENTIFIED
        IN 1960 CENSUSES.
B  *CITY SIZE-08
        U.S. CITY WITH POPULATION OF 10,000-19,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-09
        U.S. CITY WITH POPULATION OF 20,000-24,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-10
        U.S. CITY WITH POPULATION OF 25,000-49,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-11
        U.S. CITY WITH POPULATION OF 50,000-99,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-12
        U.S. CITY WITH POPULATION OF 100,000-249,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-13
        U.S. CITY WITH POPULATION OF 250,000-499,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-14
        U.S. CITY WITH POPULATION OF 500,000-999,999 AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CITY SIZE-15
        U.S. CITY WITH POPULATION OF 1,000,000 OR MORE AS
        IDENTIFIED IN 1960 CENSUSES.
B  *CIVIC CENTERS
        R  CENTRES
B  *CIVIL DEFENSE
        U  PUBLIC SAFETY
        R  FALLOUT SHELTERS
B  *CIVIL RIGHTS
```

U POLITICAL SCIENCE
R OPEN HOUSING
R EQUAL OPPORTUNITIES
R PROTEST ACTION

B *CLAIMS
U PROCEDURES
R COMPENSATION

B *CLASSIFICATION
U PLANNING ANALYSIS
C LAND USE
C URBAN ECONOMICS
R CODING

B *CLEAN AIR
USE *AIR RESOURCES

B *CLEARANCE
U LAND DEVELOPMENT
R RENEWAL

B *CLIENT-ORIENTED SERVICES
U BUSINESS
R OFFICES
EXEMPLIFIED BY LAW, ACCOUNTING, BROKERAGE FIRMS. MAY INCLUDE PRIVATE MEDICAL + DENTAL OFFICES

B *CLIENTELE
INCLUDES INMATES, PATIENTS, ETC. OF INSTITUTIONS AND AGENCIES.

B *CLIMATE
U NATURAL RESOURCES
D STORMS
R PHYSICOGRAPHY
INCLUDES AIR IN ITS NATURAL UN-POLLUTED STATE

B *CLUSTERS
U URBAN FORM
U DEVELOPMENTS/RESIDENTIAL
R SUBDIVISIONS
R PLANNED UNITS

S CO-ORDINATION
MUST BE USED WITH EACH OF THE DESCRIPTORS WHICH ARE BEING RELATED TO EACH OTHER

B *CODE ENFORCEMENT
U ADMINISTRATIVE LAW
D INSPECTION
D RECEIVERSHIP
R TENEMENTS
R WORKABLE PROGRAM
R CODES
REQUIRED ELEMENT OF THE WORKABLE PROGRAM REPORT

B *CODE ENFORCEMENT ASSIST
C FEDERAL POLICY
R HOUSING CODES
R MAINTENANCE CODES

B *CODES
F BUILDING, HOUSING CODES
F CODES, ORDINANCES
U PLANNING LAW
D FIRE PREVENTION
D BUILDING CODES
D HOUSING CODES
D MAINTENANCE CODES
M VIOLATIONS
P ENFORCEMENT
R CODE ENFORCEMENT
R BUILDING CONDITIONS
INCLUDES PLUMBING, ELECTRICAL, FIRE, ETC., CODES

B *CODES, ORDINANCES
USE *CODES

B *CODING
R CLASSIFICATION

```
        R  DATA PROCESSING
S   CCLLECTOR-DISTRIBUTOR
        S  STREETS
        1965      STANDARD LAND USE CODING MANUAL
B  *CCLLEGE HCUSING
        F  DORMITORIES
        R  CAMPUS PLANNING
        R  COLLEGES, UNIVERSITIES
B  *CCLLEGE HOUSING ASSIST
        U  HOUSING ASSIST
        REFERS TO HUD AND RELATED PROGRAMS FOR ASSISTING
        COLLEGES TO BUILD HCUSING AND OTHER SERVICE FACILITIES
B  *CCLLEGES, UNIVERSITIES
        F  UNIVERSITIES
        U  EDUCATIONAL FACILITIES
        U  EDUCATION
        R  CAMPUS PLANNING
        M  JUNIOR
        C  EXTENSION SERVICES
        R  CCLLEGE HOUSING
        R  URBAN UNIVERSITIES
B  *CCLOR
        U  AESTHETICS
        USE WHERE COLOR IS A CONSICERATION
B  *CCMMERCE
        D  BUSINESS
        D  MARKET
        THE BROAD TERM CONNOTING THE INTERCHANGE OF GOODS +
        COMMODITIES, USUALLY ON A LARGE-SCALE IN DISTINCTION
        TO THE TERM BUSINESS, WHICH IS MORE LOCAL IN NATURE
S   CCMMERCIAL
        P  LAND USE
        S  BUILDINGS
        S  DEVELOPMENTS
        S  RECREATION
        S  RELOCATION
        S  RECREATIONAL FACILITIES
B  *CCMMERCIAL AREAS
        F  BUSINESS AREAS
        U  LAND USE
        D  CBD
        D  OFFICES
        D  SHOPPING CENTERS
        D  SKID-ROW
        D  STORES
        D  WAREHOUSES
        D  TRADE CENTERS
        R  LAND VALUES
        R  NEW COMMUNITIES
        INCLUDES THE ACTIVITIES AND THE STRUCTURES IN THE AREA
B  *COMMERCIAL STRIPS
        U  COMMERCIAL AREAS
        R  FRINGE AREAS
        M  URBAN
        M  RURAL
        R  ROADSIDES
        REFERS TO COMMERCIAL DEVELOPMENT ALONG ROADS AND
        HIGHWAYS
B  *COMMISSION PLAN
        U  MUNICIPAL GOVERNMENT
        R  CITY MANAGER PLAN
B  *COMMUNICATIONS
        D  PRINTING, PUBLISHING
        D  RADIO, TELEVISION
        D  TELEPHONE, TELEGRAPH
        C  NETWORKS
        INCLUDES TELEPHONE, TELEGRAPH, RADIO + TELEVISION
```

SYSTEMS
B *COMMUNICATIONS THEORY
B *COMMUNICATIONS/LOCAL
USE *COMMUNICATIONS
U INFRASTRUCTURE
FULL SUBSTITUTION COMMUNICATIONS/LOCAL
B *COMMUNITIES
D COMMUNITY DEVELOPMENT
USE ONLY FOR PART OF A CITY IN PREFERENCE TO
NEIGHBORHOODS
B *COMMUNITY ACTION PROGRAMS
USE *ACTION PROGRAMS
B *COMMUNITY CENTERS
F NEIGHBORHOOD CENTERS
U COMMUNITY FACILITIES
B *COMMUNITY COUNCILS
R MODEL CITIES PROGRAM
R CITIZEN PARTICIPATION
R DECISION MAKING
R POVERTY PROGRAMS
ELECTED REPRESENTATIVES OF AN AREA DESIGINATED FOR
THE MODEL CITIES PROGRAM
B *COMMUNITY DEVELOPMENT
U COMMUNITIES
R ECONOMIC DEVELOPMENT
R COMMUNITY PLANNING
R BUSINESS IMPROVEMENT
REFERS TO CONCENTRATED EFFORT DIRECTED AT ONE AREA
WITHIN A CITY AS DISTINGUISHED FROM URBAN DEVELOPMENT.
IMPLIES AN ECONOMIC ORIENTATION.
B *COMMUNITY FACILITIES
D NEIGHBORHOOD SERVICE CENTERS
D EDUCATIONAL FACILITIES
D HEALTH FACILITIES
D RECREATIONAL FACILITIES
D POLICE FACILITIES
D FIRE FACILITIES
D LIBRARIES
R WATER SYSTEMS
R WASTE MANAGEMENT
R PUBLIC IMPROVEMENTS
R SERVICE AREAS
R AIRPORTS
B *COMMUNITY FACILITIES ADMINISTRATION
USE *CFA
B *COMMUNITY FACILITIES PLANS
U COMPREHENSIVE PLANS
U PLANS
B *COMMUNITY IMPROVEMENT
REFERS TO EFFORT DIRECTED AT PART OF A CITY, BASICALLY
PHYSICAL IN ORIENTATION, BUT MAY INCLUDE SOCIAL
B *COMMUNITY ORGANIZATIONS
F COMMUNITY WORKERS
U SOCIAL PLANNING
U ASSOCIATIONS
D QUASI-GOVERNMENTAL
D TENANT ASSOCIATIONS
R VOLUNTEER WORK
REFERS TO ORGANIZATIONS THAT FUNCTION ON A COMMUNITY
BASIS IN DISTINCTION TO, OR IN ADDITION TO A CITY-WIDE
BASIS, INCLUDES THE TECHNIQUES + PERSONNEL PRIVATE
OR QUASI-PUBLIC
B *COMMUNITY PLANNING
F NEIGHBORHOOD PLANNING
R SERVICE AREAS
R COMMUNITY DEVELOPMENT
R NEW COMMUNITIES

```
        R  MODEL CITIES PROGRAM
        R  COMMUNITY COUNCILS
        R  POVERTY PROGRAMS
B   *COMMUNITY RELATIONS
B   *COMMUNITY RENEWAL PROGRAMS
     USE  *CRP
B   *COMMUNITY ROOMS
        F  SEWING CENTERS
        DOES NOT UP-POST TO ROOMS
B   *COMMUNITY STRUCTURE
        REFERS BASICALLY TO THE SOCIAL STRUCTURE IN THE
        SUB-CITY
B   *COMMUNITY VALUES
     USE  *MORES
B   *COMMUNITY WELFARE
     USE  *PUBLIC WELFARE
B   *COMMUNITY WORKERS
     USE  *COMMUNITY ORGANIZATIONS
B   *COMMUTING
        U  MASS TRANSPORTATION
        U  TRIPS
        D  REVERSE COMMUTING
B   *COMPACTS
        U  LEGAL AGREEMENTS
B   *COMPANY ROLE
        F  FACTORY TOWNS
        MAY CONNOTE SOLE OR DOMINANT POSITION OR SPONSORSHIP,
        USUALLY IN RELATION TO HOUSING OR NEW TOWNS
B   *COMPARATIVE STUDIES
        U  PLANNING ANALYSIS
S    COMPARISONS
        MUST BE USED TO MODIFY BOTH DESCRIPTORS BEING
        COMPARED
B   *COMPATIBILITY
        F  INCOMPATIBILITY
        U  LAND USE
        R  CONFORMANCE
        REFERS TO RELATIONSHIP BETWEEN LAND USES
B   *COMPENSATION
        R  CLAIMS
B   *COMPENSATORY EDUCATION
        U  EDUCATION
        U  POVERTY PROGRAMS
        N  AFTER-SCHOOL
        N  PRE-SCHOOL
B   *COMPETITIONS
     USE  *AWARDS, COMPETITIONS
B   *COMPLEXES
     USE  *CENTERS
B   *COMPLIANCE
S    COMPREHENSIVE
B   *COMPREHENSIVE PLANNING
        R  PLANNING PROCESS
        R  COMPREHENSIVE PLANS
        R  PHYSICAL PLANNING
        R  VISUAL ELEMENTS
        USE FOR DISCUSSION OF TECHNIQUES AND THEORY
B   *COMPREHENSIVE PLANS
        D  CIRCULATION PLANS
        D  COMMUNITY FACILITIES PLANS
        D  LAND USE PLANS
        D  UTILITIES PLANS
        D  OPEN SPACE PLANS
        D  RECREATION PLANS
        D  AIR RESOURCES PLANS
        R  DEVELOPMENT PLANS
        R  MASTER PLANS
```

R COMPREHENSIVE PLANING
COMPREHENSIVE PLANS ARE NOT GENERALLY MASTER PLANS OFFICIALLY ADOPTED. PARTICULAR PLANS DISPLAYED AS D TERMS ARE ELEMENTS OF A COMPREHENSIVE PLAN AND ALSO ARE NOT YET IN AN OFFICIAL OR MASTER PLAN

B *COMPUTER GRAPHICS

B *COMPUTERS
F HARDWARE
U DATA PROCESSING
R SYSTEMS ANALYSIS
R PUNCHED CARD SYSTEMS
USE FOR DISCUSSIONS OF THE EQUIPMENT, INCLUDING CONSIDERATIONS OF ON-LINE AND OFF-LINE COMPUTING, AND OF IN-LINE AND BATCH PROCESSING.

B *CONCENTRATIONS
USE *DENSITY

B *CONCESSIONS, PRIVILEGES
U FRANCHISES

B *CONCRETE CONSTRUCTION
U BUILDING TECHNOLOGY

B *CONDEMNATION
USE *EMINENT DOMAIN

B *CONDOMINIUMS
U HOUSING ECONOMICS
U TENURE
R COOPERATIVES
R HOME OWNERSHIP
R PLANNED UNITS

B *CONFERENCES
R WORKSHOPS
INCLUDES THE PROGRAMS AND PROCEEDINGS, AS WELL AS SEMINARS

B *CONFIDENTIALITY
R DATA BANKS
R PERSON IDENTIFICATION

B *CONFORMANCE
U ZONING ADMINISTRATION
D ALTERATIONS
M STANDARDS
D NON-CONFORMANCE
C AMORTIZATION
R COMPATIBILITY

B *CONGESTION

B *CONGRESSIONAL DISTRICTS
U SUB-NATIONAL GOVERNMENT

B *CONSERVATION
R REHABILITATION
C NATURAL RESOURCES

B *CONSERVATION AREAS
USE *REHABILITATION AREAS

B *CONSOLIDATION

B *CONSTITUTIONS
U LAW, LAWS
U FORMATS
R CHARTERS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *CONSTRUCTION
REFERS TO THE OVER-ALL PROCESS BUT NOT TO SPECIFIC METHODS + MATERIALS, WHICH ARE COVERED BY BUILDING TECHNOLOGY

B *CONSTRUCTION INDUSTRY
REFERS PRIMARILY TO HIGHWAYS + OTHER PUBLIC WORKS AS DISTINGUISHED FROM BUILDING INDUSTRY WHICH REFERS TO RESIDENTIAL COMMERCIAL + LIGHT INDUSTRIAL BUILDING

B *CONSTRUCTION PROCEDURES
USE *BUILDING TECHNOLOGY

B *CONSULTANT REPORTS

```
        U  FORMATS
        TO BE USED WHEN A MAJOR CONSULTANCY HAS BEEN INVOLVED
        IN THE PREPARATION OF THE DOCUMENT.
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B   *CONSULTANTS
        U  STAFF
        FOR DISCUSSION OF THE USE OF CONSULTANTS
B   *CONSUMER SERVICES
        U  SOCIAL SERVICES
        R  LEGAL ASSISTANCE
B   *CONSUMERS
B   *CONSUMPTION
B   *CONTAINER SYSTEMS
        F  PIGGY-BACK
        U  TRANSPORT SYSTEMS
        R  FREIGHT
S    CONTENT
        FOR SYSTEMS USE
B   *CONTRACTORS
B   *CONTRACTS
        U  LEGAL AGREEMENTS
        U  FORMATS
        D  BIDS, BIDDING
        INCLUDES THE SPECIFICATIONS, PROCEDURES, DOCUMENTS.
        ENTER UNDER FORMAT ANALYSIS WHERE TEXT IS PROVIDED.
B   *CONTROL SYSTEMS
        U  MANAGEMENT SCIENCE
        R  MONITORING
S    CONTROLS
        P  LAND USE
        S  ROADSIDES
        P  AIR POLLUTION
        P  NUISANCES
        P  SOUND
        P  WATER POLLUTION
        FOR DISCUSSIONS OF AIR POLLUTION, NUISANCES, SOUND,
        WATER POLLUTION, USE ABATEMENT
B   *CONURBATION
        U  CITIES, TOWNS
        U  MEGALOPOLIS
        R  METROPOLITAN AREAS
        CENTER ABOUT WHICH THERE IS A GREAT AGGREGATION OF
        URBAN COMMUNITIES, E.G. CHICAGO IS A CONURBATION
S    CONVENIENCE
        S  SHOPPING CENTERS
B   *CONVERSIONS
        F  ADAPTIVE USES
B   *COOPERATIVES
        U  HOUSING ECONOMICS
        U  TENURE
        R  CONDOMINIUMS
        R  HOME OWNERSHIP
        R  PLANNED UNITS
B   *COORDINATES
     USE  *GRIDS
S    COORDINATION
B   *CORE
        U  URBAN FORM
        R  CENTERS
S    CORPORATE
        S  INCOME
        S  INCOME TAX
        S  SPONSORS
B   *CORPORATIONS
B   *CORRECTIVE INSTITUTIONS
        U  GOVERNMENTAL SERVICES
        U  LAW ENFORCEMENT
```

B *CORRIDORS
U URBAN FRONT/LINEAR
R FINGE AREAS
R RINGS
B *COST ACCOUNTING
USE *COSTING
B *COST-BENEFIT
U INDICATORS
B *COST-REVENUE
U INDICATORS
B *COST, STANDARD OF LIVING
F STANDARD OF LIVING
B *COSTING
F COST ACCOUNTING
U FINANCING
R ACCOUNTING
INCLUDES COST ESTIMATION + COST CONTROLS
S COSTS
F PRICES
R BENEFITS
B *COUNCIL-MANAGER PLAN
U MUNICIPAL GOVERNMENT
B *COUNCILS OF GOVERNMENT
R REGIONAL COUNCILS
B *COUNSELING SERVICE
USE *SOCIAL SERVICES
B *COUNTIES
U SUB-NATIONAL GOVERNMENT
D TOWNSHIPS
USED ALONE, MAY INCLUDE PROBLEMS OF PUBLIC
ADMINISTRATION
S COUNTY
B *COUNTY GOVERNMENT
B *COUNTY PLANNING
D RURAL PLANNING
S COUNTY-MUNICIPAL
S INTERGOVERNMENTAL RELATIONS
B *COURTS
B *COVENANTS
F RESTRICTIVE COVENANTS
U LEGAL AGREEMENTS
B *CPM
F CRITICAL PATH METHOD
U PROGRAMMING
B *CREDIT
B *CRIME
USE *SOCIAL PATHOLOGY
B *CRITICAL PATH METHOD
USE *CPM
B *CRITIQUE
CRITICAL ANALYSIS WITH STRONG ELEMENT OF
OPPOSITION. NOT TO BE USED FOR DOCUMENTS CONCERNED
WITH REVIEW AND APPRAISAL.
B *CROSSINGS
U TRANSPORT SYSTEMS
U CIRCULATION ELEMENTS
D BRIDGES
D TUNNELS
D FERRIES
D GRADE CROSSINGS
D INTERCHANGES
D INTERSECTIONS
D VIADUCTS
B *CRP
F COMMUNITY RENEWAL PROGRAMS
U RENEWAL
M PRELIMINARY

B *CRP APPLIC
U RENEWAL PLANNING
B *CRP REPORT
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE
B *CUE LIBRARY
TO BE USED FOR UNION CATALOG INFORMATION.
B *CUL DE SAC
U STREETS
B *CULTURAL ACTIVITIES
D GRAPHIC ARTS
D HISTORIC SITES
D LIBRARIES
D MUSEUMS
D NATURE EXHIBITS
D PERFORMING ARTS
INCLUDES THE HOUSING OF THE ACTIVITIES
B *CULTURAL PATTERNS
USE *MORES
B *CULVERTS
B *CURBS
USE *SIDEWALKS
B *CURRICULA
S CYCLICAL
B *DAMS
U WATER RESOURCES
U STRUCTURES
U WATERFRONTS
B *DANCE
USE *PERFORMING ARTS
COVERS BOTH THE STUDY AND THE PERFORMANCE OF THE DANCE AS A SERIOUS ART FORM. EXCLUDES BALLROOM DANCING WHICH FALLS UNDER AMUSEMENTS
B *DATA
U DATA BANKS
U PLANNING PROCESS
D CENSUS
R DATA PROCESSING
P STATISTICS
R DATA SOURCES
RAW INFORMATION, ALPHABETIC AND/OR NUMERIC, WHICH CONSTITUTES THE INPUT FOR FURTHER PROCESSING, BY HUMAN AND/OR MACHINE TECHNIQUES. USE ALONE FOR DISUSSIONS OF THE NATURE OF DATA
B *DATA BANKS
U INFORMATION SYSTEMS
U INFORMATION CENTERS
D DATA
R DATA PROCESSING
R CONFIDENTIALITY
R PERSON IDENTIFICATION
ORGANIZED AGGREGATES OF DATA, FROM A NUMBER OF INPUT SOURCES
B *DATA PROCESSING
U INFORMATION SYSTEMS
D PUNCHED CARD SYSTEMS
D SYSTEMS ANALYSIS
D COMPUTERS
R DATA
R DATA BANKS
R CODING
C MODELS
C SIMULATIONS
C INDEXING
APPLIES TO ALL ELECTRONIC DATA-HANDLING TECHNIQUES, BOTH EQUIPMENT AND OPERATIONS
B *DATA SOURCES

R INFORMATION SYSTEMS
R DATA
R DIRECTORIES

B =DATES
USED ON THE DOCUMENT WORKSHEET

B *DAY-CARE
U COMMUNITY FACILITIES
R CHILDREN

B *DAYLIGHT
U ILLUMINATION

B *DEAD LAND
F TAX DELINQUENT LAND
U LAND RESOURCES
R REAL PROPERTY TAXES

B *DEBT
F BONDED DEBT

B *DEBT SERVICE
USE *FINANCING CHARGES

B *DECENTRALIZATION
D BRANCHING
D CENTRALIZATION
R CENTRES
R POPULATION

B *DECISION MAKING
U PLANNING PROCESS
U POLITICS
R GAMES, GAME THEORY
R MANAGEMENT SCIENCE
R COMMUNITY COUNCILS

B *DEFENSE
F MILITARY
F NATIONAL DEFENSE
R IMPACTED AREAS
R DEFENSE WORKERS

B *DEFENSE WORKERS
U SPECIAL GROUPS
C EDUCATION
C HOUSING
R DEFENSE
R IMPACTED AREAS

S DEFICIENCIES

B *DELINQUENCY
USE *SOCIAL PATHOLOGY

B *DEMAND
USE *MARKET
TO BE USED, WHEN THERE IS NO DISCUSSION OF CONTROLS

B *DEMOCRACY
U POLITICAL SCIENCE

B *DEMOGRAPHIC FACTORS
D FERTILITY
D MIGRATION
USE FOR MATERIALS INVOLVING THE EFFECTS OF POPULATION

B *DEMOGRAPHY
D POPULATION
D POPULATION CHARACTERISTICS
D POPULATION PROJECTIONS
USE FOR THE SCIENCE OF POPULATION STATISTICS

B *DEMOLITION
D SPOT DEMOLITION
R SALVAGE

B *DEMOLITION ASSIST

B *DEMONSTRATION CITIES
TERM *MODEL CITIES PROGRAM BECAME GENERAL USAGE
DURING 1966.

B *DEMONSTRATION PLANNING
R MODEL CITIES PROGRAM

B *DEMONSTRATION REPORTS

```
        U  FORMATS (CONT 8)
        P  RESEARCH PROJECTS
        GENERALLY APPLIES TO SECTION 314 OF HOUSING ACT OF
        1954.  SHOULD BE ENTERED FOR ALL REPORTS EMANATING
        FROM SUCH GRANTS
B   *DEMONSTRATIONS
        F  PILOT PROJECTS
        USE FOR ALL DEMONSTRATION-TYPE REPORTS NOT PART OF
        THE DEMONSTRATION PROGRAMS OF HUD
B   *DENSITY
        F  CONCENTRATIONS
        U  SPATIAL ANALYSIS
        D  OVERCROWDING
        R  LOCATION
        R  COMMERCIAL
        R  INDUSTRIAL
        R  RESIDENTIAL
        C  ZONING
        INCLUDES POPULATION DISTRIBUTION.
B   *DENTAL SERVICES
        U  HEALTH SERVICES
        R  MEDICAL SERVICES
B   *DEPARTMENT STORES
        U  RETAIL TRADE
        U  STORES
B   *DEPLETED AREAS
        U  NATURAL RESOURCES
        R  RESOURCE PRODUCTION
        R  DEPRESSED AREAS
        AREAS IN WHICH MAN HAS DEPLETED THE NATURAL RESOURCES
B   *DEPRECIATION
        U  VALUATION
B   *DEPRESSED AREAS
        B  GHETTOS
        R  SLUMS
        R  BLIGHT
        R  FRINGE AREAS
        R  DEPLETED AREAS
        CAN RANGE IN SIZE FROM PART OF A CITY TO AN ENTIRE
        REGION.
B   *DEPRESSED CONSTRUCTION
        C  HIGHWAYS
B   *DESALINATION
        U  WATER RESOURCES
B   *DESEGREGATION
     USE  *INTEGRATION
B   *DESIGN
        U  AESTHETICS
        U  ENVIRONMENTAL DESIGN
        D  SCALE
        D  SPACE
        R  ARCHITECTURE
        R  LANDSCAPE ARCHITECTURE
        R  URBAN DESIGN
        P  CITIES, TOWNS
        R  ACCESS
B   *DESIGN (CONT)
        S  CENTRES
        S  RECREATIONAL FACILITIES
        USE AS A DESCRIPTOR WHEN THE DESIGN FACTORS HAVE
        STAND-ALONE RETRIEVAL VALUE.  USE AS MODIFIER WHEN
        DESIGN IS A SUBORDINATE CONSIDERATION
B   *DESIGN STANDARDS
        U  STANDARDS INFORMATION
        R  MODEL CITIES PROGRAM
S    DESIGNATION
        S  HISTORIC SITES
```

S LANDMARKS
B *DETACHED HOUSES
USE *HOUSES
B *DETERIORATION
U BUILDING CONDITIONS
R DILAPIDATION
R OBSOLESCENCE
USE IN RELATION TO PHYSICAL STRUCTURE
B *DEVELOPED AREAS
USE *BUILT-UP AREAS
B *DEVELOPERS
F REDEVELOPERS
D REAL ESTATE BUSINESS
D DEVELOPMENT CORPORATIONS
R SPONSORS
R BUILDING INDUSTRY
R REALTORS
C BROCHURES
B *DEVELOPING COUNTRIES
USE *UNDERDEVELOPED COUNTRIE
B *DEVELOPMENT CORPORATIONS
U DEVELOPERS
C ECONOMIC DEVELOPMENT
C LAND DEVELOPMENT
C HOUSING PROGRAMS
M INDUSTRIAL
M RESIDENTIAL
M COMMERCIAL
M FEDERAL
M STATE
M MUNICIPAL
R QUASI-GOVERNMENTAL
R NON-PROFIT HOUSING
B *DEVELOPMENT MANAGEMENT
C PROPERTY MANAGEMENT
R DEVELOPMENTS
R REAL ESTATE BUSINESS
B *DEVELOPMENT PLANS
R COMPREHENSIVE PLANS
R ECONOMIC DEVELOPMENT
R GOALS
R URBAN DEVELOPMENT
GENERAL LONG RANGE PLANS, OR STATEMENTS OF GOALS
B *DEVELOPMENTS
F IMPROVEMENT SCHEMES
F PROJECTS
D BUILDINGS
D SUPERBLOCKS
D NEW COMMUNITIES
M COMMERCIAL
M INDUSTRIAL
M MULTI-PURPOSE
M RESIDENTIAL
R RENEWAL AREAS
R PLANNED COMMUNITIES
R SITE PLANNING
R DEVELOPMENT MANAGEMENT
R CENTRES
R CENTERS
R AIR RIGHTS PROJECTS
B *DEVELOPMENTS (CONT)
R PLANNED UNITS
USE FOR A GROUP OF BUILDINGS CONSTRUCTED AS PART OF A UNIFIED SCHEME. MAY RANGE IN SIZE FROM A PROJECT TO A TOWN. FROM A PLANNERS POINT OF VIEW, DEVELOPMENTS ARE NOT NECESSARILY SUFFICIENTLY PLANNED.
B *DEVELOPMENTS/COMMERCIAL

```
     USE  *DEVELOPMENTS
          D  SHOPPING CENTERS
          D  STORES
          FULL SUBSTITUTION  DEVELOPMENTS/COMMERCIAL
B    *DEVELOPMENTS/INDUSTRIAL
     USE  *DEVELOPMENTS
          D  INDUSTRIAL PARKS
          FULL SUBSTITUTION  DEVELOPMENTS/INDUSTRIAL
B    *DEVELOPMENTS/MULTI-PURPOSE
     USE  *DEVELOPMENTS
          D  NEW TOWNS
          D  SATELLITES
          FULL SUBSTITUTION  DEVELOPMENTS/MULTI-PURPOSE
B    *DEVELOPMENTS/RESIDENTIAL
     USE  *DEVELOPMENTS
          D  CLUSTERS
          D  GARDEN APARTMENTS
          D  GARDEN CITIES
          D  NEW TOWNS
          D  SUBDIVISIONS
          FULL SUBSTITUTION  DEVELOPMENTS/RESIDENTIAL
B    *DICTIONARIES, THESAURI
          U  FORMATS
S     DIRECT
          O  INDIRECT
          S  LOANS
B    *DIRECTORIES
          U  FORMATS
          R  DATA SOURCES
          ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B    *DISASTER PROJECTS
          R  DISASTERS
B    *DISASTER SERVICES
          U  PUBLIC SAFETY
B    *DISASTERS
          F  EARTHQUAKES
          F  NATURAL DISASTERS
          F  FLOODS
          D  STORMS
          R  FLOOD PLAIN ZONING
          R  DISASTER PROJECTS
          INCLUDES THE AREAS AND THE PLANNING TO AVOID OR
          MITIGATE THE EFFECTS
B    *DISCOUNT RATE
          U  FINANCING CHARGES
          R  MORTGAGE FINANCE
B    *DISCOUNT STORES
          U  RETAIL TRADE
B    *DISINVESTMENT
B    *DISPLACED PERSONS
          U  SPECIAL GROUPS
          DOES NOT REFER TO PERSONS DISPLACED BY RENEWAL OR
          OTHER FORMS OF RELOCATION
B    *DISPLAY
      USE  *GRAPHIC DISPLAYS
B    *DISSERTATIONS
          U  FORMATS
          INCLUDES THESES.
          ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B    *DISTRIBUTION
          R  LOCATION
          WHEN DOCUMENT DEALS WITH FUNDS OR FINANCIAL
          ASSISTANCE, USE SUBDESCRIPTOR, ALLOCATION.
          USE AS MODIFIER AS WELL AS DESCRIPTOR
B    *DIVERSIFICATION
B    *DOCUMENTATION
          F  INFORMATION PROCESSING
```

U INFORMATION SYSTEMS
U INFORMATION CENTERS
D INDEXING
USE TO APPLY TO ELECTRONIC STORAGE AND RETRIEVAL SYSTEMS, AND TO AUTOMATED DISSEMINATION PROGRAMS

B *DORMITORIES
USE *COLLEGE HOUSING

B *DORMITORY TOWNS
USE *SUBURBS

B *DOT
F U.S. TRANSPORTATION DEPT.

B *DOWNTOWNS
USE *CBD

B *DRAA.LP
F LPA LETTER
U FORMATS
C FEDERAL POLICY
R RENEWAL ASSIST/FEDERAL
AT INPUT, ENTER ENTIRE DOCUMENT NUMBER. AT QUERY, USE DRAA.LP$

B *DRAFTING

B *DRAINAGE
U TOPOGRAPHICAL FEATURES

B *DRAMA
USE *PERFORMING ARTS
INCLUDES DRAMATIC STUDY

B *DRINKING PLACES
USE *EATING, DRINKING PLACES
ANY PLACE WITH A LIQUOR-SERVING LICENSE

B *DRIVERS
USE *HUMAN FACTORS
REFERS TO MOTORISTS

B *DRIVING
USE *AUTOMOBILES

B *DROPOUTS
U SPECIAL GROUPS
U EDUCATIONAL ATTAINMENT
R YOUTH

B *DROUGHT
USE *WATER RESOURCES

B *DUE PROCESS

B *DWELLING UNITS
USE *HOUSING STOCK

B *DYNAMIC PROCESS
F STOCHASTIC PROCESS
D FORECASTING
D POPULATION PROJECTIONS
R URBANIZATION
C CITIES, TOWNS
C URBAN PLANNING
RELEVANT ALSO WHERE GROWTH AND FORECASTING ARE USED AS MODIFIERS

B *EARTHQUAKES
USE *DISASTERS

B *EASEMENTS
U LAND USE CONTROLS
U LEGAL AGREEMENTS
U REAL PROPERTY LAW

B *EATING, DRINKING PLACES
F RESTAURANTS
F DRINKING PLACES
U BUILDINGS/COMMERCIAL
U COMMERCIAL AREAS

B *ECOLOGICAL STUDIES
U ENVIRONMENTAL PROTECTION
R ECOLOGY
R NATURAL RESOURCES

```
        R  WILDLIFE
        R  RECREATION AREAS
B  *ECOLOGY
        F  ANIMAL LIFE
        U  NATURAL RESOURCES
        R  SOCIOLOGY
        R  ECOLOGICAL STUDIES
        THE STUDY OF MAN + ANIMALS IN RELATION TO THEIR
        ENVIRONMENT
B  *ECONOMETRICS
        U  ECONOMICS
        D  MACROECONOMICS
        D  MICROECONOMICS
        MATHEMATICAL ECONOMICS
S   ECONOMIC
        S  INDICATORS
        S  IMPACT
        S  ACTIVITY
B  *ECONOMIC ACTIVITY
    USE  *ACTIVITY
        FULL SUBSTITUTION  ACTIVITY/ECONOMIC
B  *ECONOMIC ASSISTANCE
    USE  *FINANCIAL ASSISTANCE
B  *ECONOMIC BASE
        U  URBAN ECONOMICS
        U  ECONOMICS
        D  BUSINESS
        D  INDUSTRY
        D  MANPOWER
        R  ECONOMIC BASE STUDIES
        REFERS TO THE INGREDIENTS OF THE LOCAL ECONOMY
B  *ECONOMIC BASE STUDIES
        D  RETAIL SALES
        R  ECONOMIC BASE
B  *ECONOMIC CONDITIONS
        U  ECONOMICS
        D  BUSINESS CYCLES
        D  INFLATION
        D  NATIONAL INCOME
        REFERS TO THE NATIONAL ECONOMY OR A SUBSTANTIAL
        PORTION THEREOF
B  *ECONOMIC DEVELOPMENT
        F  AREA DEVELOPMENT
        U  ECONOMIC PLANNING
        R  ECONOMIC OPPORTUNITY
        R  STATE PLANNING
        M  STATE
        M  NATIONAL
        C  DEVELOPMENT CORPORATIONS
        R  URBANIZATION
        R  COMMUNITY DEVELOPMENT
        R  INDUSTRIAL LOCATION
        R  DEVELOPMENT PLANS
        THE CONCERN IS FOR THE AREA
B  *ECONOMIC FACTORS
        U  ECONOMICS
        D  INDICATORS
        D  IMPACT
B  *ECONOMIC GEOGRAPHY
        U  GEOGRAPHY
B  *ECONOMIC OPPORTUNITY
        U  ECONOMIC PLANNING
        U  SOCIAL PLANNING
        R  ECONOMIC DEVELOPMENT
        R  EQUAL OPPORTUNITIES
        R  POVERTY PROGRAMS
        REFERS TO THE LEGISLATION AND TO THE IMPLEMENTING
```

PROGRAMS. WHEN THE PARTICULAR CONCERN IS FOR THE LEGISLATION ITSELF, THE DESCRIPTOR LEGISLATION SHOULD ALSO BE USED, MODIFIED BY FEDERAL. THE CONCERN IS FOR THE INDIVIDUAL

B *ECONOMIC PLANNING
D ECONOMIC OPPORTUNITY
D ECONOMIC DEVELOPMENT
R NATIONAL PLANNING

B *ECONOMIC POLICY
R NATIONAL PLANNING

B *ECONOMIC SECURITY

B *ECONOMICS
U SOCIAL SCIENCES
D ECONOMETRICS
D PRIVATE SECTOR
D PUBLIC SECTOR
D URBAN ECONOMICS
D ECONOMIC CONDITIONS
D ECONOMIC FACTORS
D ECONOMIC BASE
D REGIONAL ECONOMICS
P MATHEMATICAL ANALYSIS

B *ECONOMISTS

B *ECUMENOPOLIS

B *EDUCATION
D COMPENSATORY EDUCATION
D EDUCATIONAL ATTAINMENT
D TEACHING MACHINES
M ELEMENTARY
M HIGHER
M SECONDARY
M AFTER-SCHOOL
M PRE-SCHOOL
P PLANNERS
R VISUAL AIDS
C EQUAL OPPORTUNITIES

B *EDUCATION/ELEMENTARY
USE *EDUCATION
D KINDERGARTENS
FULL SUBSTITUTION EDUCATION/ELEMENTARY

B *EDUCATION/PRE-SCHOOL
USE * EDUCATION
D NURSERY SCHOOLS

S EDUCATIONAL

B *EDUCATIONAL ATTAINMENT
F SCHOOLING
U EDUCATION
D SOCIO-ECONOMIC STATUS
D DROPOUTS

B *EDUCATIONAL FACILITIES
U COMMUNITY FACILITIES
D SCHOOLS
D COLLEGES, UNIVERSITIES
D EDUCATIONAL PARKS
D TRADE SCHOOLS
D CAMPUS PLANNING
R SCHOOL DISTRICTS
R SCHOOL SYSTEMS
USE FOR DISCUSSIONS THAT PRIMARILY INVOLVE THE PHYSICAL PLANT

B *EDUCATIONAL PARKS
U EDUCATIONAL FACILITIES

B *EKISTICS
U SOCIAL SCIENCES
U BEHAVIORAL SCIENCES
R INTERDISCIPLINE
SCIENCE OF HUMAN SETTLEMENTS

B *ELDERLY
F AGED
U SPECIAL GROUPS
D RETIREMENT HOMES
D HOUSING THE ELDERLY
C LIVING REQUIREMENTS
R OLDER WORKERS
C URBAN SOCIOLOGY
P HOUSING PROGRAMS
B *ELECTED OFFICIALS
USE *PUBLIC OFFICIALS
B *ELECTIONS
U POLITICS
S ELECTRIC
S AUTOMOBILES
S VEHICLES
B *ELECTRICITY
U POWER
R UTILITIES
S ELECTRONIC
S DATA PROCESSING
S CONTROL SYSTEMS
S ELEMENTARY
F PRIMARY
S SCHOOLS
S EDUCATION
B *ELEVATED CONSTRUCTION
R AIR RIGHTS
C HIGHWAYS
B *ELEVATORS
U BUILDING EQUIPMENT
B *ELIGIBILITY
B *EMERGENCY SERVICES
USE *PUBLIC SAFETY
B *EMINENT DOMAIN
F EXPROPRIATIONS
F CONDEMNATION
U LAND USE CONTROLS
U LEGAL PROCESS
B *EMPLOYMENT
F UNEMPLOYMENT
U LABOR
N SEASONAL
R SKILLED-UNSKILLED
B *EMPLOYMENT SERVICES
S ENABLING
S LEGISLATION
S ENCLOSED
F INDOOR
S RECREATIONAL FACILITIES
B *ENCYCLOPEDIAS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B *ENGINEERING
U PHYSICAL SCIENCES
U ENVIRONMENTAL DESIGN
D STRUCTURAL ENGINEERING
D SURVEYING
B *ENGINEERS
B *ENTERTAINMENT
F MOTION PICTURES
U ASSEMBLY PLACES
D RADIO, TELEVISION
R PERFORMING ARTS
R THEATERS
INCLUDES MOVIES, LEGITIMATE THEATRE, NIGHTCLUBS,
DANCE HALLS AND SIMILAR ACTIVITIES NOT NOT CLASSIFIED

AS THE PERFORMING ARTS
S ENTRY
USE ON DOCUMENT WORKSHEET, IN DATE ANALYSIS SECTION, TO RECORD DATE OF ENTRY OF DOCUMENT INTO SYSTEM.
B *ENVIRONMENT
USE *URBAN ENVIRONMENT
B *ENVIRONMENTAL DESIGN
D ARCHITECTURE
D DESIGN
D LANDSCAPE ARCHITECTURE
D URBAN PLANNING
D ENGINEERING
R URBAN DESIGN
A GROUP OF DISCIPLINES REPRESENTING A SYNTHESIS OF THE FUNCTIONAL AND AESTHETIC QUALITIES OF MANS ENVIRONMENT
B *ENVIRONMENTAL PROTECTION
F METABOLISM
D AIR POLLUTION
D WATER POLLUTION
D SOUND
D INDUSTRIAL WASTE
D LITTER
D RADIOACTIVITY
D WASTE DISPOSAL
D WASTE MANAGEMENT
D ECOLOGICAL STUDIES
R NUISANCES
B *EQUAL OPPORTUNITIES
U INTEGRATION
U MANPOWER
C EDUCATION
R CIVIL RIGHTS
R ECONOMIC OPPORTUNITY
B *EQUALIZATION
R TAXATION
R FEDERAL AID
B *EQUALIZATION RATE
U ASSESSMENT
B *EQUITY
R MORTGAGES
R AMORTIZATION
B *EROSION
U SOILS
B *ESTATE HOUSING
USE *PUBLIC HOUSING
B *ETHICS
B *ETHNIC CENTERS
USE FOR AREAS SUCH AS CHINATOWN, N.Y.
B *ETHNICITY
U POPULATION CHARACTERISTICS
R MINORITY GROUPS
1966 SESSIONS - CASO
USE FOR THOSE DISCUSSIONS OF POPULATION THAT INVOLVE CHARACTERIZATION BY RACE, NATIONAL ORIGIN OR COLOR.
B *EVALUATION
DISTINGUISH FROM VALUATION
B *EVICTION
U LEGAL PROCESS
R LANDLORD AND TENANT
B *EXECUTIVES
U MANAGEMENT SCIENCE
B *EXHIBITION HALLS
U ASSEMBLY PLACES
B *EXHIBITS
U FORMATS

ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE

S EXPANSIBLE
USE FLEXIBLE

B *EXPENDITURES

S EXPERIMENTAL

B *EXPRESSWAYS
F FREEWAYS
U HIGHWAYS

B *EXPROPRIATIONS
USE *EMINENT DOMAIN

B *EXTENSION SERVICES
U TECHNICAL ASSISTANCE
C COLLEGES, UNIVERSITIES
C STATE GOVERNMENT
ADVISORY SERVICES COVERING A WIDE RANGE OF COMMUNITY PROBLEMS IN URBAN AREAS.

B *FACTOR ANALYSIS
R MATHEMATICAL ANALYSIS

B *FACTORIES
U INDUSTRIAL AREAS
U BUILDINGS/INDUSTRIAL

B *FACTORY TOWNS
USE *COMPANY ROLE

B *FAIR HOUSING
USE *OPEN HOUSING

B *FAIRGROUNDS
USE *AMUSEMENT AREAS

B *FALLOUT SHELTERS
R CIVIL DEFENSE

B *FAMILIES
R HOUSEHOLDS
R MARRIAGE

B *FAMILY ALLOWANCES
U INCOME
R FAMILY INCOME
USED FOR DISCUSSIONS OF GUARANTEED ANNUAL INCOME, NEGATIVE INCOME TAX, AND OTHER TYPES OF FAMILY INCOME SUPPLEMENT PROPOSALS

B *FAMILY INCOME
U SOCIO-ECONOMIC STATUS
R FAMILY ALLOWANCES
R PUBLIC WELFARE

B *FAMILY LIVING REQUIREMENTS
USE *LIVING REQUIREMENTS

B *FAMILY PLANNING SERVICES
U HEALTH SERVICES
R SOCIAL SERVICES

B *FAMILY SIZE
U POPULATION CHARACTERISTICS
N LARGE
C SCALE

B *FARES
USE *CHARGES

B *FARMS
U AGRICULTURE

S FEASIBILITY

B *FEASIBILITY STUDIES
U PLANNING ANALYSIS

S FEDERAL
S LEGISLATION
S LEGISLATIVE BODIES
S HOUSING PROGRAMS
S LEGISLATIVE HISTORY
S PERIODIC REPORTS
R NATIONAL
S AGENCIES
S HEARINGS

S RENEWAL
S REQUIREMENTS

B *FEDERAL AID
C HOUSING PROGRAMS
C OPEN SPACE
R FINANCIAL ASSISTANCE
R FINANCING
R EQUALIZATION
USE ONLY FOR OVER-ALL DISCUSSIONS

B *FEDERAL ENCLAVES
USE *PUBLIC LAND
FULL SUBSTITUTION. PUBLIC LAND/FEDERAL

B *FEDERAL GOVERNMENT
R PUBLIC ADMINISTRATION

B *FEDERAL HOUSING ADMINISTRATION
USE *FHA

B *FEDERAL NATIONAL MORTGAGE ADMINISTRATION
USE *FNMA

B *FEDERAL OFFICIALS
USE *PUBLIC OFFICIALS

B *FEDERAL POLICY
C REHABILITATION ASSIST
C RENEWAL ASSIST
C DRAA.LP
USE FOR ALL MATERIALS THAT REPRESENT RESPONSIBLE
STATEMENTS OF FEDERAL POLICY

B *FEDERAL RESERVE
R BANKS, BANKING
REFERS TO THE BANKING SYSTEM

S FEDERAL-CITY
S INTERGOVERNMENTAL RELATIONS

S FEDERAL-STATE
S INTERGOVERNMENTAL RELATIONS

B *FEE SIMPLE
USE *REAL PROPERTY LAW

B *FEES
USE *CHARGES

B *FELLOWSHIPS, SCHOLARSHIPS
F SCHOLARSHIPS
U FINANCIAL ASSISTANCE
R EDUCATION
R STUDENT AID
R URBAN AFFAIRS
R TRAINING PROGRAMS

B *FEMALE
USE *SEX

B *FERRIES
U CROSSINGS

B *FERTILITY
U DEMOGRAPHIC FACTORS

B *FHA
U HUD
R MORTGAGE INSURANCE
R MORTGAGE FINANCING
U.S. FEDERAL HOUSING ADMINISTRATION

B *FILMS
U FORMATS
1962 SUBJECT HEADINGS OF THE HHFA LIBRARY
REFERS TO EDUCATIONAL AND TRAINING MATERIAL,
INCLUDING FILMSTRIPS USED FOR SLIDES.
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *FILTERING
U HOUSING ECONOMICS

B *FINANCE
D BANKS, BANKING
P PUBLIC
USED IN ITS LARGEST SENSE TO CONNOTE THE TOTALITY OF

```
        FISCAL TRANSACTIONS
B   *FINANCIAL ASSISTANCE
        F   ECONOMIC ASSISTANCE
        D   SEED MONEY
        D   GRANTS
        D   LOANS
        D   FELLOWSHIPS, SCHOLARSHIPS
        D   TAX INCENTIVES
        D   MORTGAGE INSURANCE
        D   LOW-INTEREST
        D   SUBSIDIES
        D   STUDENT AID
        R   FEDERAL AID
        R   STATE AID
        C   TECHNICAL ASSISTANCE
        R   STATE PROGRAMS
B   *FINANCIAL ASSISTANCE (CONT)
        USE ONLY WHERE MORE SPECIFIC TERM, SUCH AS CODE
        ENFORCEMENT ASSIST, IS NOT AVAILABLE
B   *FINANCIAL PROGRAMMING
        U   FINANCING
B   *FINANCIAL SOURCES
        U   FINANCING
        D   FINANCIAL ASSISTANCE
        D   TAX REVENUES
        D   BONDS
        D   CHARGES
        D   FRANCHISES
        D   LOCAL CONTRIBUTION
        D   INVESTMENT
        D   PENSION FUNDS
        C   PRIVATE SECTOR
        C   PUBLIC SECTOR
        P   PRIVATE
        M   ALLOCATIONS
        USE WHEN MULTIPLE SOURCES OF FUNDS ARE INVOLVED
B   *FINANCING
        D   FINANCIAL SOURCES
        D   FINANCIAL PROGRAMMING
        D   COSTING
        D   REFINANCING
        R   FEDERAL AID
        R   STATE AID
        P   SCHOOLS
        USE AS A MODIFIER AS WELL AS A DESCRIPTOR.
B   *FINANCING CHARGES
        F   DEBT SERVICE
        D   INTEREST
        D   DISCOUNT RATE
B   *FIRE ESCAPES
        U   BUILDING EQUIPMENT
B   *FIRE FACILITIES
        U   PUBLIC SAFETY
        U   COMMUNITY FACILITIES
B   *FIRE INSURANCE
        U   PROPERTY PROTECTION
        R   SLUMS
        R   GHETTOS
B   *FIRE PREVENTION
        U   BUILDING TECHNOLOGY
        U   CODES
B   *FISCAL PLANNING, POLICY
        R   PPBS
B   *FISHING
    USE   *HUNTING, FISHING
B   *FISHING INDUSTRY
        U   RESOURCE PRODUCTION
```

S FLEXIBLE
F EXPANSIBLE
S BUILDINGS
S ZONING
B *FLOOD PLAINS
U TOPOGRAPHICAL FEATURES
R FLOOD PLAINS ZONING
B *FLOOD PLAINS ZONING
U ZONING
U FLOOD PROTECTION
R FLOOD PLAINS
R DISASTERS
B *FLOOD PROTECTION
D FLOOD PLAINS ZONING
B *FLOODS
USE *DISASTERS
B *FLOOR AREA RATIO
U INDICATORS
U ZONING REQUIREMENTS
RELATION OF FLOOR AREA TO LOT SIZE.
B *FLOOR SPACE AREA
U ZONING REQUIREMENTS
B *FLOORSCAPE
U LANDSCAPE ARCHITECTURE
U ARCHITECTURE
R MALLS
LANDSCAPE ARCHITECTURE INDEX
B *FNMA
U HUD
R MORTGAGES
U.S. FEDERAL NATIONAL MORTGAGE ADMINISTRATION
B *FOOD SUPPLY
R AGRICULTURE
B *FORECASTING
F PROJECTING
U PLANNING PROCESS
U DYNAMIC PROCESS
THE TECHNIQUE OR PROCESS
S FORECASTS
F PROJECTIONS
S MARKET
B *FORECLOSURES
U MORTGAGES
B *FORESTS, FORESTRY
U RESOURCE PRODUCTION
R LUMBERING
B *FORMATS
D ARTICLES
D ATLASES
D BASE MAPS
D BIBLIOGRAPHY
D BIOGRAPHY
D BRIEFS
D BROCHURES
D CATALOGS
D CHARTERS
D CHECKLISTS
D CITY DIRECTORIES
D CONSTITUTIONS
D CONSULTANT REPORTS
D CONTRACTS
D PLANS
D CODES
B *FORMATS (CONT)
D DICTIONARIES, THESAURI
D DIRECTORIES
D DISSERTATIONS

- ENCYCLOPEDIAS
- EXHIBITS
- FILMS
- FORMS
- HEARINGS
- INDEXES
- JUDICIAL DECISIONS
- LECTURES
- LEGAL TEXTS
- MANUALS
- MAPS
- MICROGRAPHS

- **USE** PERIODICALS

- NEWS ITEMS
- NEWSLETTERS
- NEWSPAPERS
- PATENTS
- PERIODIC REPORTS
- PERIODICAL LISTS
- PRESS RELEASES
- PROCEEDINGS
- RECORDS
- STATISTICS
- STYLE MANUALS
- TEXTBOOKS
- YEAR BOOKS, ALMANACS
- ZONING ORDINANCES
- SPECIAL REPORTS

- ANNUAL REPORT
- BLUE DIRECTORIES
- DRAG-LP
- REVIEWS
- ACQUISITIONS LISTS
- SEE REFERENCES
- PUBLICATIONS LISTS
- SERIAL ENTRIES
- DEMONSTRATION REPORTS
- PASS TRANSPORTATION DEMO REPORTS
- PLAN REVIEWS
- ABSTRACTS

- **USE** FORMATS

- **USE** ANALYSIS,
- **USE** ANALYSIS,
- **USE** PROGRAMMING DEVICES
- **USE** PROGRAMMING DEVICES
- **USE** SPECIAL PROJECTS LAB
- **USE** ACCOUNTANTS
- **USE** ACCOUNTANTS

U URBAN FORM/CIRCULAR
R CORRIDORS
R RINGS
R DEPRESSED AREAS
USED TENTATIVELY FOR BOTH GEOGRAPHIC & ECONOMIC
FRINGES

B *FRINGE BENEFITS
U WAGES

B *FRONTAGE
U LOTS, PARCELS
U BUILDING SITES
U ZONING REQUIREMENTS

B *FUEL
U POWER
U GEOLOGICAL RESOURCES

B *FUNDS
STOCK OF MONEY FOR A SPECIFIC PURPOSE. DO NOT
MIS-USE INSTEAD OF FINANCIAL SOURCES

B *FURNITURE, EQUIPMENT
F REFRIGERATION
INCLUDES STOVES, REFRIGERATORS, & THE LIKE, BUT NOT
AIR-CONDITIONERS & ELEVATORS WHICH ARE PRECISE TERMS
UP-DATED TO BUILDING EQUIPMENT

B *GAMING, GAME THEORY
R SIMULATIONS
R DECISION MAKING

B *GARAGES
R PARKING FACILITIES

B *GARDEN APARTMENTS
U DEVELOPMENTS/RESIDENTIAL
U ATTACHED HOUSES
R APARTMENTS
R PATIO HOUSES

B *GARDEN CITIES
U DEVELOPMENTS/RESIDENTIAL
U SUBURBS
R SATELLITES
R NEW TOWNS
R GREEN BELTS

B *GAS
U POWER
U GEOLOGICAL RESOURCES
R PIPE LINES
R UTILITIES

B *GENERAL DEVELOPMENT ORDERLY GENERAL PLAN
USE *GROP

B *GENERAL PLANS
USE *MASTER PLANS

B *GEO
F GEOGRAPHIC ORIENT.
USE FOR DOCUMENTS THAT ARE PRIMARILY DISCUSSIONS OF
PLANNING OR OTHER ACTIVITIES IN A PARTICULAR AREA.
MOST CITY AND STATE REPORTS WILL FALL INTO THIS
CATEGORY. DO NOT USE WHERE THE PLACE IS ONLY
ILLUSTRATIVE OF THE DISCUSSION.

B *GEOGRAPHICS
U ORIENTATIONS

S *GEOGRAPHIC DISTRIBUTION
R ZONES

B *GEOGRAPHIC ORIENT.
USE *GEO

B *GEOGRAPHY
U REGIONAL DEVELOPMENTS
U REGIONAL DEVELOPMENT
U URBAN DEVELOPMENT

B *GEOLOGICAL RESOURCES
U NATURAL RESOURCES

```
        D  FUEL
        D  GAS
        R  MINING AND EXTRACT IND
        R  PHYSIOGRAPHY
        INCLUDES GEOLOGY UNDER THIS DESCRIPTOR
B  *GHETTOS
        R  MINORITY GROUPS
        R  DEPRESSED AREAS
        O  OPEN HOUSING
        R  FIRE INSURANCE
B  *GIFTS
        R  LAND ACQUISITION
B  *GLOSSARIES
        R  DICTIONARIES, THESAURI
B  *GNRP
        F  GENERAL NEIGHBORHOOD RENEWAL PLAN
B  *GNRP APPLIC
        U  RENEWAL PLANNING
        N  PART I
        N  PART II
B  *GOALS
        F  GOALS FORMULATION
        U  PLANNING PROCESS
        R  DEVELOPMENT PLANS
        INCLUDES OBJECTIVES
B  *GOALS FORMULATION
    USE  *GOALS
B  *GOLF COURSES
B  *GOVERNMENT
    USE  *PUBLIC ADMINISTRATION
B  *GOVERNMENTAL SERVICES
        U  PUBLIC BUILDINGS
        E  POSTAL SERVICES
        D  PUBLIC SAFETY
        O  CORRECTIVE INSTITUTIONS
        R  DEFENSE
        EXECUTIVE, LEGISLATIVE AND JUDICIAL FUNCTIONS,
        INCLUDING THE FACILITIES
B  *GRADE
    USE  *TOPOGRAPHICAL FEATURES
B  *GRADE CROSSINGS
        U  CROSSINGS
B  *GRANT-IN-AID
    USE  *GRANTS
B  *GRANTS
        F  CAPITAL GRANT
        F  GRANT-IN-AID
        F  LOAN AND GRANT
        U  FINANCIAL ASSISTANCE
        O  FOUNDATION PARTICIPATION
        C  REHABILITATION ASSIST
B  *GRAPHIC ARTS
        F  ART GALLERIES
        U  CULTURAL ACTIVITIES
        U  ART
        R  PUBLIC
        R  MUSEUMS
        INCLUDES BOTH THE TEACHING AND EXHIBITION OF PAINTING,
        SCULPTURE, PHOTOGRAPHY, HANDICRAFTS, & RELATED ARTS,
        ALSO THE PLACES WHERE THESE ACTIVITIES OCCUR
B  *GRAPHIC DISPLAYS
        F  DISPLAY
        F  ORGANIZATION CHARTS
        U  MAPPING
        U  MAPS
        U  PHOTOGRAPHS
        U  VISUAL AIDS
```

INCLUDES SCHEMATIC, DIAGRAMATIC AND OTHER ILLUSTRATIVE MATERIALS

B *GRAPHICS
D MAPPING
C COMPUTERS
METHODOLOGICAL DISCUSSIONS INVOLVING VISUAL COMMUNICATION, PRESENTATION, TECHNIQUES.

S GRAPHS

B *GRAVITY MODELS
U MODELS
1965 PITTSBURGH UNIV. CENTER FOR REGIONAL ECONOMIC STUDIES. SUBJECT HEADING LIST

B *GREEN BELTS
U OPEN SPACE
R GARDEN CITIES

B *GREY AREAS
USE *BLIGHT

B *GRIDS
U MAPPING
R GEOGRAPHIC IDENTIFICATION

S GROSS
C NET

B *GROUND WATER
USE *WATER RESOURCES

B *GROUP DYNAMICS
R LEADERSHIP
INCLUDES SOCIAL DYNAMICS

B *GROUP HEALTH FACILITIES
U HEALTH FACILITIES
NON-GOVERNMENTAL GROUP PRACTICES

B *GROUP QUARTERS
C RETIREMENT HOMES
1965 STANDARD LAND USE CODING MANUAL

S GROWTH
S CITIES, TOWNS
REFERS TO INCREASES IN EITHER DENSITY OR SIZE.

B *HAA
F HOUSING ASSISTANCE ADMINISTRATION
U HUD

B *HANDBOOKS
USE *MANUALS

B *HANDICAPPED
F CHRONICALLY ILL
U SPECIAL GROUPS

B *HARDWARE
USE *COMPUTERS

B *HAZARDS
USE *SAFETY

B *HEALTH FACILITIES
U HEALTH PLANNING
U COMMUNITY FACILITIES
D HOSPITALS
D HEALTH RESORTS
D NURSING HOMES
D MEDICAL CENTERS
D GROUP HEALTH FACILITIES
R SOCIAL PLANNING

B *HEALTH PLANNING
F HOSPITAL PLANNING
D HEALTH FACILITIES
D HEALTH SERVICES
R SOCIAL PLANNING

B *HEALTH RESORTS
U HEALTH FACILITIES

B *HEALTH SERVICES
U HEALTH PLANNING
D DENTAL SERVICES

```
        D  MEDICAL SERVICES
        D  MENTAL HEALTH SERVICES
        D  FAMILY PLANNING SERVICES
        R  SOCIAL SERVICES
B  *HEALTH, EDUCATION AND WELFARE DEPT.
    USE  *HEW
B  *HEARINGS
        U  FORMATS
        M  STATE
        M  FEDERAL
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.  USE
        ALSO LEGISLATIVE HISTORY AS SUBJECT DESCRIPTOR.
B  *HEATING
    USE  *THERMAL CONTROLS
        U  BUILDING EQUIPMENT
S   HEAVY SERVICE
B  *HEIGHT
    USE  *BULK, HEIGHT
B  *HELICOPTERS
        U  VERTICAL RISE AIRCRAFT
B  *HELIPORTS
        U  AIRPORTS
B  *HETEROGENEITY
    USE  *HOMOGENEITY
B  *HEW
        F  HEALTH, EDUCATION AND WELFARE DEPT.
B  *HHFA
        SUPERCEDED BY HUD
B  *HIGH SCHOOLS
    USE  *SCHOOLS
        FULL SUBSTITUTION SCHOOLS/SECONDARY
B  *HIGH SPEED GROUND TRANSPORTATION
    USE  *HSGT
B  *HIGH-INCOME
        U  INCOME-LEVEL
B  *HIGH-RISE
    USE  *SCALE
S   HIGHER
B  *HIGHEST USE
    USE  *BEST USE
B  *HIGHWAY BEAUTIFICATION
    USE  *ROADSIDES
B  *HIGHWAY MAINTENANCE
B  *HIGHWAYS
        F  ROADS
        U  CIRCULATION
        U  CIRCULATION ELEMENTS
        D  EXPRESSWAYS
        D  PARKWAYS
        D  TRUCKS, TRUCKING
        D  ROADSIDES
        C  ACCESS
        R  UNDER CONSTRUCTION
        R  ARTERIAL
        C  RESEARCH
        C  ELEVATED CONSTRUCTION
        C  DEPRESSED CONSTRUCTION
        R  BY-PASS
        FOR DISCUSSION OF COMMERCIAL DEVELOPMENT ALONG
        HIGHWAYS, USE COMMERCIAL STRIPS.
B  *HILLSIDES
    USE  *SLOPES
B  *HISTORIC PLANS
        R  URBAN HISTORY
        INCLUDES GRAPHIC PRESENTATIONS AS WELL AS TEXTUAL
        DISCUSSION OF ANCIENT, MEDIEVAL AND PRE 20TH CENTURY
        EXPRESSIONS OF URBAN PLANS AND FORMS.
```

B *HISTORIC PRESERVATION
R HISTORIC SITES
B *HISTORIC SITES
U CULTURAL ACTIVITIES
M DESIGNATION
M PRESERVATION
C RESTORATION
R HISTORIC PRESERVATION
B *HISTORICAL DEVELOPMENT
DO NOT UP-POST TO HISTORY
B *HISTORY
U SOCIAL SCIENCES
C URBAN HISTORY
P CITIES, TOWNS
REFERS TO THE ACADEMIC DISCIPLINE.
USE ALSO AS A MODIFIER.
B *HOME IMPROVEMENT
USE *PROPERTY IMPROVEMENT
B *HOME OWNERSHIP
R COOPERATIVES
R CONDOMINIUMS
R RESIDENTIAL LOCATION
B *HOME OWNERSHIP PROGRAMS
U HOUSING PROGRAMS
R MORTGAGE FINANCING
FINANCIAL AND TECHNOLOGICAL PROGRAMS WHICH FACILITATE
HOME OWNERSHIP FOR LOW INCOME FAMILIES
B *HOMESTEAD
U PUBLIC LAND
B *HOMOGENEITY
F HETEROGENEITY
B *HOSPITAL PLANNING
USE *HEALTH PLANNING
B *HOSPITALS
U HEALTH FACILITIES
B *HOTELS, MOTELS
F MOTELS
U TRANSIENT HOUSING
C RESORTS
S HOURLY
B *HOURS OF LABOR
B *HOUSE NUMBERING
USE *STREET ADDRESSES
B *HOUSEHOLDS
R FAMILIES
R HOUSING STOCK
B *HOUSEKEEPING
INCLUDES HOUSEKEEPING SERVICES, CLASSES
B *HOUSES
F DETACHED HOUSES
U BUILDINGS/RESIDENTIAL
C ROOMS
P MULTI-FAMILY
R OWNER-BUILT
C SALES
R ATTACHED HOUSES
REFERS TO ONE OR TWO FAMILY STRUCTURES
B *HOUSING
C HOUSING ECONOMICS
C HOUSING STOCK
C OPEN HOUSING
P MARKET
P PUBLICLY ASSISTED
P SALES
R SELF-HELP
R RENEWAL
R SUBSTANDARD

```
        C  LOW-INCOME
        C  MIDDLE-INCOME
        C  RESEARCH
B  *HOUSING ASSIST
        D  LOW-RENT HOUSING
        D  HOUSING THE ELDERLY
        D  COLLEGE HOUSING ASSIST
        R  HOUSING PROGRAMS
        REFERS TO THE SPECIFIC PROGRAMS OF HAA, NOT INCLUDING
        HAA
B  *HOUSING ASSISTANCE ADMINISTRATION
     USE  *HAA
B  *HOUSING AUTHORITIES
        F  PUBLIC HOUSING AUTHORITIES
        R  PUBLIC HOUSING
B  *HOUSING CODES
        U  CODES
        R  CODE ENFORCEMENT ASSIST
B  *HOUSING CONDITIONS
     USE  *BUILDING CONDITIONS
B  *HOUSING DEMAND
        R  HOUSING STOCK
B  *HOUSING ECONOMICS
        U  HOUSING
        U  URBAN ECONOMICS
        D  FILTERING
        D  MARKET/RESIDENTIAL
        D  RENTS
        D  RENTAL HOUSING
        D  COOPERATIVES
        D  CONDOMINIUMS
        D  SLUM OWNERSHIP
        R  LAND ECONOMICS
        C  SALES
        R  PROPERTY VALUES
B  *HOUSING ESTATES
     USE  *PUBLIC HOUSING
B  *HOUSING PROGRAMS
        D  LEASED HOUSING
        D  LOW-RENT HOUSING
        D  HOME OWNERSHIP PROGRAMS
        R  NON-PROFIT HOUSING
        M  FEDERAL
        M  STATE
        C  LEGISLATION
        C  FEDERAL AID
        R  HOUSING THE ELDERLY
        C  DEVELOPMENT CORPORATIONS
        C  LOW-INCOME
        C  MIDDLE-INCOME
        P  ELDERLY
        REFERS TO SPECIFIC LEGISLATION + ITS IMPLEMENTATION,
        OR TO PROPOSALS FOR EITHER
B  *HOUSING STARTS
        R  HOUSING STOCK
B  *HOUSING STOCK
        F  DWELLING UNITS
        F  HOUSING UNITS
        D  OCCUPANCY//VACANCY
        D  RENTAL HOUSING
        D  SINGLE-ROOM OCCUPANCY
        R  HOUSEHOLDS
        R  MULTI-FAMILY
        R  SINGLE FAMILY
        R  MULTIPLE DWELLINGS
        R  UNITS
        C  LOW-INCOME
```

C MIDDLE-INCOME
R HOUSING STARTS
R HOUSING DEMAND

B *HOUSING THE ELDERLY
U ELDERLY
U HOUSING ASSIST
D RETIREMENT HOMES
R HOUSING PROGRAMS
REFERS BOTH TO TECHNICAL ASPECTS AND TO VARIOUS SPECIAL PROGRAMS

B *HOUSING UNITS
USE *HOUSING STOCK

B *HOVERCRAFT
USE *AIR-CUSHIONED VEHICLES

B *HSGT
F HIGH SPEED GROUND TRANSPORTATION
U TRANSPORT TECHNOLOGY
R TRANSPORT SYSTEMS
R RAIL TRANSPORT
R RAPID TRANSIT
R TRANSPORT EQUIPMENT

B *HUBS
USE *CENTRES

B *HUD
F U.S. HOUSING AND URBAN DEVELOPMENT, DEPT.
D FHA
D PHA
D FNMA
D CFA
D HAA
D RAA
R DHUD
R METROPOLITAN DESK
USE FOR THOSE MATERIALS BY OR ABOUT HUD WHERE HUD DOES NOT APPEAR IN THE DOCUMENT NUMBERS.

B *HUD DIRECTIVE
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *HUD LIBRARY
F U.S. HOUSING AND URBAN DEVELOPMENT DEPT. LIBRARY
FOR UNION CATALOG INFORMATION.

B *HUMAN ECOLOGY
USE *MAN

B *HUMAN FACTORS
F DRIVERS

B *HUMAN RELATIONS

B *HUMAN RENEWAL
USE *SOCIAL RENEWAL

B *HUMAN SCALE
USE *SCALE

B *HUNTING, FISHING
F FISHING
U SPORTS ACTIVITIES
R WILDLIFE

B *HYDROFOILS
U AIR-CUSHIONED VEHICLES
U MARINE TRANSPORT

B *IDLE LAND
USE *VACANT LAND

B *ILLUMINATION
F LIGHTING
U BUILDING EQUIPMENT
U VISUAL ELEMENTS
D DAYLIGHT
INCLUDES NATURAL AND ARTIFICIAL ILLUMINATION, LIGHT AS AN ELEMENT IN THE ENVIRONMENT, AS WELL AS THE EQUIPMENT AND CONTROLS

B *IMAGE
1960 LYNCH, KEVIN. THE IMAGE OF THE CITY
B *IMMIGRATION
USE *MIGRATION
B *IMPACT
U PLANNING ANALYSIS
M ECONOMIC
M PHYSIOLOGICAL
M PSYCHOLOGICAL
M SOCIAL
B *IMPACTED AREAS
R DEFENSE
REFERS TO THOSE AREAS IN WHICH A LARGE FEDERAL INSTALLATION FORMS A MAJOR PORTION OF THE ECONOMIC BASE.
S IMPLEMENT
SHORT FOR IMPLEMENTATION
B *IMPROVED LAND
C VACANT LAND
B *IMPROVEMENT SCHEMES
USE *DEVELOPMENTS
B *IN TOWN-NEW TOWN
USE *NEW TOWN-IN TOWN
S IN-CITY
S INDUSTRIAL PARKS
S OPEN SPACE
S NEW COMMUNITIES
B *IN-LIEU PAYMENTS
USE *TAX EXEMPTIONS
B *IN-SERVICE TRAINING
U CAREER DEVELOPMENT
R TRAINING PROGRAMS
R STAFF
CAN BE VOCATIONAL, PROFESSIONAL OR SUB-PROFESSIONAL
B *INCENTIVES
C INVESTMENT
M SOCIAL
ORDINARILY FINANCIAL UNLESS MODIFIED BY SOCIAL
B *INCINERATION
R SOLID WASTE DISPOSAL
B *INCOME
D SALARIES
D WAGES
D FAMILY ALLOWANCES
M PERSONAL
M PUBLIC
M CORPORATE
P NATIONAL
B *INCOME TAX
U TAXATION
M FEDERAL
M LOCAL
M STATE
B *INCOME TAX AIDS
USED FOR PROGRAMS INVOLVING INCOME TAX CREDITS, EXEMPTIONS AND DEDUCTIONS
B *INCOME-LEVEL
U POPULATION CHARACTERISTICS
D HIGH-INCOME
D LOW-INCOME
D MIDDLE-INCOME
B *INCOMPATIBILITY
USE *COMPATIBILITY
B *INCORPORATION
U METROPOLITAN AREA GOVT
B *INDEXES
U FORMATS

REFERS ONLY TO PUBLICATION FORMATS. FOR ECONOMIC +
SOCIAL INDEXES USE INDICATORS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *INDEXING
U DOCUMENTATION
U LIBRARY SERVICE
C DATA PROCESSING
IF COMPUTERS ARE INVOLVED, ADD TERM *DATA PROCESSING

B *INDIANS
U MINORITY GROUPS
AMERICAN INDIANS, INCLUDING THE RESERVED AREAS AS WELL
AS THE GROUP

B *INDICATORS
F PRICE INDEXES
U PLANNING ANALYSIS
D COST-BENEFIT
D COST-REVENUE
D FLOOR AREA RATIO
D SALES
M ECONOMIC
R MONITORING

S INDIRECT
D DIRECT

S INDOOR
USE ENCLOSED

S INDUSTRIAL
P LAND USE
S BUILDINGS
S DEVELOPMENTS
S RELOCATION
S CITIZEN PARTICIPATION

B *INDUSTRIAL AREAS
U LAND USE
D FACTORIES
D INDUSTRIAL PARKS
D RESEARCH AND DEVELOPMENT
D SALVAGE
R LAND VALUES
R NEW COMMUNITIES
INCLUDES THE ACTIVITIES AND INCIDENTAL DISCUSSION OF
STRUCTURES IN THE AREA

B *INDUSTRIAL DEVELOPMENT

B *INDUSTRIAL LOCATION
R ECONOMIC DEVELOPMENT

B *INDUSTRIAL PARKS
U INDUSTRIAL AREAS
U BUILDINGS/INDUSTRIAL
M IN-CITY

B *INDUSTRIAL WASTE
U ENVIRONMENTAL PROTECTION
R AIR POLLUTION
R WATER POLLUTION

B *INDUSTRIALIZATION

B *INDUSTRY
U ECONOMIC BASE
D RESEARCH AND DEVELOPMENT
D SHIP-BUILDING
D SALVAGE
D STEEL INDUSTRY
D MANUFACTURING
M SEASONAL
C SATELLITES
R CITIZEN PARTICIPATION/INDUSTRIAL
P LOCATION

B *INFLATION
U ECONOMIC CONDITIONS

B *INFORMATION CENTERS

```
        F  URBAN DATA CENTERS
        D  DATA BANKS
        D  DOCUMENTATION
        R  INFORMATION SYSTEMS
        R  LIBRARIES
B  *INFORMATION PROCESSING
    USE  *DOCUMENTATION
B  *INFORMATION RETRIEVAL SYSTEMS
    USE  *INFORMATION SYSTEMS
B  *INFORMATION SCIENTISTS
        D  LIBRARY SERVICE
B  *INFORMATION SYSTEMS
        F  URBAN INFORMATION SYSTEMS
        F  INFORMATION RETRIEVAL SYSTEMS
        D  DATA BANKS
        D  DOCUMENTATION
        C  NETWORKS
        C  RESEARCH AND DEVELOPMENT
        R  INFORMATION CENTERS
        R  LIBRARY SERVICE
        R  MANAGEMENT SCIENCE
        R  DATA SOURCES
B  *INFRASTRUCTURE
        D  COMMUNICATIONS/LOCAL
        D  POWER/LOCAL
        D  SEWERAGE
        D  TRANSPORT SYSTEMS/LOCAL
        D  WATER SYSTEMS/LOCAL
        THE TOTALITY OF SERVICE & FACILITY NETWORKS
        NECESSARY TO SUPPORT COMMUNITY LIFE
S   INLYING
        O  OUTLYING
        ALSO USED FOR INNER
B  *INNOVATION
B  -INPUT INDEX $
        INDICATES INPUT INDEX ISSUE IN WHICH THE DOCUMENT IS
        LISTED.
B  *INPUT-OUTPUT
B  *INSPECTION
        U  CODE ENFORCEMENT
B  *INSTALLMENT FINANCE
B  *INSTANT REHAB
    USE  *BUILDING TECHNOLOGY
        TO EXPRESS THIS IDEA, COORDINATE BUILDING TECHNOLOGY
        WITH REHABILITATION
S   INSTITUTIONAL
        S  INVESTMENTS
B  *INSULATION
        U  BUILDING TECHNOLOGY
B  *INSURANCE COMPANIES
        U  SPONSORS
        R  INVESTMENTS/INSTITUTIONAL
B  *INSURANCE RATES
        R  LOW-COST LOANS
        R  MORTGAGE INSURANCE
B  *INTEGRATION
        F  DESEGREGATION
        F  SEGREGATION
        C  OPEN HOUSING
        C  EQUAL OPPORTUNITIES
        R  PUPIL TRANSPORT
        R  RACE RELATIONS
        R  MINORITY GROUPS
S   INTENSITY
B  *INTERAGENCY
        F  INTERGOVERNMENTAL
B  *INTERCHANGES
```

```
        U  CROSSINGS
B  *INTERDEPARTMENT
    USE  *INTERAGENCY
B  *INTERDEPARTMENTAL PLANNING AND HOUSING LIBRARY
    USE  *IPH LIBRARY
B  *INTERDISCIPLINE
        R  EXISTICS
B  *INTEREST
        U  FINANCING CHARGES
        C  MORTGAGES
B  *INTERGOVERNMENTAL PROGRAMS
        R  STATE PROGRAMS
        R  INTERGOVERNMENTAL RELATIONS
        R  JOINT PROJECTS
B  *INTERGOVERNMENTAL RELATIONS
        U  PUBLIC ADMINISTRATION
        P  STATE
        P  MUNICIPAL
        P  REGIONAL
        P  FEDERAL-STATE
        P  FEDERAL-CITY
        P  STATE-MUNICIPAL
        P  INTERSTATE
        P  COUNTY-MUNICIPAL
        Q  STATE PROGRAMS
        Q  INTERGOVERNMENTAL PROGRAMS
        P  REGIONAL-LOCAL
        Q  REVENUE SHARING
        Q  TAX SHARING
B  *INTERGOVERNMENTAL RELATIONS/FEDERAL-CITY
        D  METROPOLITAN DESK
B  *INTERINDUSTRY
B  *INTERIORS
B  *INTERLOCAL COOPERATION
        R  INTERGOVERNMENTAL RELATIONS
S   INTERMUNICIPAL
    USE  MUNICIPAL
B  *INTERNATIONAL RELATIONS
S   INTERREGIONAL
    USE  REGIONAL
B  *INTERSECTIONS
        U  CROSSINGS
        U  STREETS
S   INTERSTATE
        R  STATE
        S  INTERGOVERNMENTAL RELATIONS
S   INTERURBAN
S   INVENTORY
S   INVESTIGATION
B  *INVESTMENTS
        U  FINANCIAL SOURCES
        U  PRIVATE SECTOR
        U  PENSION FUNDS
        U  SAVINGS
        U  SECURITIES
        R  INSTITUTIONAL
        R  LIMITED PROFIT
        R  DIVIDENDS
        R  TAX EXEMPTIONS
B  *INVISIBLE HANDSHIP
S   INVOKE
        E  SUITABLE
        S  ASSIGNED
B  *ION LIBRARY
        P  UNIVERSITY-REGIONAL PLANNING AND HOUSING LIBRARY
        UNIVERSITY-REGIONAL PLANNING AND HOUSING LIBRARY, OHIO
        STATE UNIV
```

B *IRRIGATION
U WATER SYSTEMS
B *ISLANDS
U WATERFRONTS
B *JAPANESE AMERICANS
U MINORITY GROUPS
B *JOB DESCRIPTIONS
USE *JOBS
B *JOB VACANCIES
USE *JOBS
B *JOBS
F JOB DESCRIPTIONS
F JOB VACANCIES
B *JOINT PROJECTS
R INTERGOVERNMENTAL PROGRAMS
B *JOURNEY TO WORK
U TRIPS
B *JUDICIAL DECISIONS
U LAW, LAWS
U FORMATS
REFERS TO THE BODY OF THE DECISIONS RATHER THAN TO
THE PROCEDURES FOR OBTAINING THEM, WHICH IS THE
SUBJECT OF THE DESCRIPTOR JUDICIAL REVIEW.
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B *JUDICIAL REVIEW
F APPELLATE PROCEDURE
INCLUDES THE PROCESS FOR OBTAINING THE REVIEW
S JUNIOR
S COLLEGES, UNIVERSITIES
S SCHOOLS/SECONDARY
WHEN MODIFYING COLLEGES, UNIVERSITIES INCLUDES
COMMUNITY COLLEGES + SIMILAR 2 YEAR PROGRAMS
B *JUNK YARDS
F AUTOMOBILE GRAVEYARDS
R ROADSIDES
S JURISDICTION
B *KINDERGARTENS
U EDUCATION/ELEMENTARY
B *KITCHENS
U ROOMS
INCLUDES DISCUSSIONS OF THE EQUIPMENT ORDINARILY
FOUND IN KITCHENS
B *LABOR
D EMPLOYMENT
D MANPOWER
D PRODUCTIVITY
D CAREER DEVELOPMENT
D UNIONS
D WORKING CONDITIONS
D LABOR FORCE
B *LABOR FORCE
U LABOR
R MANPOWER
R CAREER DEVELOPMENT
USE FOR DISCUSSIONS OF CHARACTERISTICS OF LABOR GROUP
B *LABOR STANDARDS
B *LAKES
U WATERWAYS
B *LAND ACQUISITION
F ACQUISITION OF LAND
D LAND DISPOSITION
D PURCHASE
R LAND VALUES
R LEGAL PROCESS
R LAND RESOURCES
R ACQUISITION APPRAISALS
C APPRAISAL

R GIFTS
R STRUCTURE ACQUISITION
R WRITE-DOWN
THE PROCESS OF OBTAINING LAND FOR DEVELOPMENT OR REDEVELOPMENT. INCLUDES PROBLEMS INVOLVED IN THE ASSEMBLAGE OF LARGE AREAS, REPRESENTS THE APPLICATION OF LEGAL PROCESS TO LAND RESOURCES

B *LAND BANKS
R LAND RESOURCES

B *LAND DEVELOPMENT
F AREA DEVELOPMENT
U URBAN DEVELOPMENT
D RECLAMATION
D CLEARANCE
R LAND RESOURCES
C DEVELOPMENT CORPORATIONS

B *LAND DISPOSITION
U LAND ACQUISITION

B *LAND ECONOMICS
U URBAN ENVIRONMENT
D LAND VALUES
D REAL ESTATE BUSINESS
R HOUSING ECONOMICS
C SALES
R LAND USE

B *LAND FILL
U RECLAMATION

B *LAND OWNERSHIP
U REAL PROPERTY LAW
R TENURE
R TIME-ZONING
C PLANNED UNITS

B *LAND RESERVES
U LAND RESOURCES
R TIME-ZONING

B *LAND RESOURCES
D AIR RIGHTS
D DEAD LAND
D LAND RESERVES
D UNDERDEVELOPED AREAS
D VACANT LAND
D WETLANDS
D PUBLIC LANDS
R LAND ACQUISITION
R LAND DEVELOPMENT
LAND AVAILABLE FOR DEVELOPMENT OR REDEVELOPMENT

B *LAND TAX
U TAXATION
R REAL PROPERTY TAXES

B *LAND TENURE
USE *TENURE

B *LAND TITLES
USE *REAL PROPERTY LAW

B *LAND USE
U URBAN ECONOMICS
D COMMERCIAL AREAS
D INDUSTRIAL AREAS
D RESIDENTIAL AREAS
D RELIGIOUS ACTIVITIES
D RESORTS
D CIRCULATION ELEMENTS
D AGRICULTURE
D COMPATIBILITY
P COMMERCIAL
P CONTROLS
P INDUSTRIAL
P RESIDENTIAL

R LAND ECONOMICS
B *LAND USE (CONT)
M MIXED PURPOSES
M MULTI-PURPOSE
C CLASSIFICATION
R COMPREHENSIVE PLANNING
R LOCATION
R MINING AND EXTRACT IND
CONCERNED WITH CLASSIFYING + DESCRIBING THE
UTILIZATION OF LAND RESOURCES, PRIMARILY FOR URBAN OR
URBAN-RELATED ACTIVITIES. FOR ECONOMIC INFLUENCES,
USE LAND ECONOMICS
B *LAND USE CONTROLS
D ARCHITECTURAL CONTROLS
D EASEMENTS
D EMINENT DOMAIN
D ZONING
C POLICE POWER
D FLOOD PLAINS
D SUBDIVISION REGULATIONS
D OFFICIAL MAPS
REFERS TO NON-ECONOMIC DEVICES FOR CONTROLLING OR
GUIDING THE USE OF LAND IN THE PUBLIC INTEREST
B *LAND USE INTENSITY
B *LAND USE PLANS
U COMPREHENSIVE PLANS
U PLANS
R PHYSICAL PLANNING
R LAND USE STUDY
N STATE-WIDE
B *LAND USE STUDY
R LAND USE PLANS
B *LAND USE, MARKET SURVEY
U RENEWAL PLANNING
USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE
LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B *LAND VALUES
U LAND ECONOMICS
D APPRAISAL
D ASSESSMENT
D TAX BASE
D MARKET VALUE
D BEST USE
R LAND ACQUISITION
R COMMERCIAL AREAS
R INDUSTRIAL AREAS
R RESIDENTIAL AREAS
R REUSE
B *LAND VALUES (CONT)
R PROPERTY VALUES
REFERS TO DEVICES FOR INDICATING THE VALUE OF REAL
PROPERTY AS WELL AS TO DISCUSSIONS OF THE VALUES
THEMSELVES. THE VALUES HERE REFERRED TO ARE PRIMARILY
ECONOMIC UNLESS MODIFIED TO THE CONTRARY. INCLUDES
THE IMPROVEMENT ON THE PROPERTY. CONSIDER
MODIFICATION BY METHODOLOGY.
B *LANDLORD AND TENANT
F TENANT AND LANDLORD
N RIGHTS
R TENURE
R LEASES
R EVICTION
R SLUM OWNERSHIP
B *LANDLORDS
B *LANDMARKS
F ARCHITECTURAL LANDMARKS
N PRESERVATION

```
        N  DESIGNATION
        P  BUILDINGS
        C  BOTANICAL FEATURES
        C  HISTORIC SITES
        C  RESTORATION
B  *LANDSCAPE ARCHITECTS
B  *LANDSCAPE ARCHITECTURE
        U  ENVIRONMENTAL DESIGN
        D  FLOORSCAPE
        R  ARCHITECTURE
        R  SITE PLANNING
        R  DESIGN
        R  TOPOGRAPHICAL FEATURES
        R  BOTANICAL FEATURES
        INCLUDES LANDSCAPE DESIGN
B  *LANDSCAPING
S   LARGE
        S  FAMILY SIZE
        S  SCALE
        D  SMALL
B  *LAW ENFORCEMENT
        D  POLICE FACILITIES
        D  CORRECTIVE INSTITUTIONS
        R  PUBLIC SAFETY
B  *LAW, LAWS
        F  STATUTES
        U  POLITICAL SCIENCE
        D  ADMINISTRATIVE LAW
        D  JUDICIAL DECISIONS
        D  LEGISLATION
        D  PLANNING LAW
        D  REAL PROPERTY LAW
        D  CHARTERS
        D  CONSTITUTIONS
        THE MOST GENERAL DISCUSSION OF LEGAL
        IMPLEMENTATION OF ANY PROGRAM
B  *LAYOUT
    USE  *SITE PLANNING
B  *LEADERSHIP
        R  GROUP DYNAMICS
        R  POLITICS
B  *LEASED HOUSING
        U  LOW-RENT HOUSING
        U  HOUSING PROGRAMS
        R  PUBLIC HOUSING
B  *LEASES
        U  LEGAL AGREEMENTS
B  *LECTURES
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B  *LEGAL AGREEMENTS
        D  COMPACTS
        D  COVENANTS
        D  CONTRACTS
        D  EASEMENTS
        D  LEASES
B  *LEGAL AID
    USE  *LEGAL ASSISTANCE
B  *LEGAL ASSISTANCE
        F  LEGAL AID
        R  OMBUDSMAN
        R  CONSUMER SERVICES
B  *LEGAL PROCESS
        D  EMINENT DOMAIN
        D  EVICTION
        D  LICENSES
        R  LAND ACQUISITION
```

B *LEGAL TEXTS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
USE FOR THE TEXT OF A BILL, ACT, LAW, STATUTE, ETC.
B *LEGISLATION
U LAW, LAWS
C LEGISLATIVE HISTORY
C UNIFORM LEGISLATION
C MODEL LEGISLATION
R LOBBYING
P LOCAL
C HOUSING PROGRAMS
M MUNICIPAL
M COUNTY
M STATE
M ENABLING
M FEDERAL
USE FOR DISCUSSION OF CONTENT. FOR TEXT OF LEGISLATION
USE, LEGAL TEXTS.
B *LEGISLATION/MUNICIPAL
USE *LEGISLATION
F ORDINANCES
D ZONING ORDINANCES
FULL SUBSTITUTION LEGISLATION/MUNICIPAL
B *LEGISLATIVE BODIES
M FEDERAL
M MUNICIPAL
M STATE
R REAPPORTIONMENT
B *LEGISLATIVE HISTORY
U LEGISLATION
M FEDERAL
M STATE
M MUNICIPAL
MUST BE USED WHEN HEARINGS IS ENTERED AS A FORMAT
TERM. REVERSE IS NOT NECESSARILY TRUE.
B *LEISURE
C LIFE STYLE
C RECREATION
C RESORTS
R SEASONAL HOUSING
R TOURISM
C SOCIAL FUNCTIONS
B *LIBRARIES
U COMMUNITY FACILITIES
U CULTURAL ACTIVITIES
D SCHOOL LIBRARIES
M SPECIAL
R INFORMATION CENTERS
R PLANNING LIBRARIES
IMPLIES PUBLIC
B *LIBRARY SERVICE
U INFORMATION SCIENTISTS
D CATALOGING
D INDEXING
R INFORMATION SYSTEMS
REFERS TO THE DISCIPLINE OF LIBRARIANSHIP, RATHER
THAN TO THE SERVICES PROVIDED BY THE FACILITIES,
WHICH IS COVERED BY THE DESCRIPTOR LIBRARIES
B *LICENSES
U LEGAL PROCESS
INCLUDES LICENSING
B *LIENS
USE *REAL PROPERTY LAW
B *LIFE STYLE
U LEISURE
U MAN

B *LIGHTING
USE *ILLUMINATION
S LIMITATIONS
B *LIMITED DIVIDEND
USE *LIMITED PROFIT
B *LIMITED PROFIT
F LIMITED DIVIDEND
U PRIVATE SECTOR
R INVESTMENTS
INCLUDES MITCHELL-LAMA HOUSING IN N.Y. STATE FOR MULTI-FAMILY, MIDDLE INCOME UNITS IN URBAN RENEWAL AREAS
S LINEAR
S URBAN FORM
B *LINKAGE
U NETWORKS
R NODES
INCLUDES BOTH THE PROCESS AND THE CONNECTING PARTS, OR LINKS
B *LIQUIDITY
USE *MARKETABILITY
B *LITTER
U ENVIRONMENTAL PROTECTION
B *LIVABILITY
U HOUSING
U MAN
D OVERCROWDING
B *LIVING REQUIREMENTS
F FAMILY LIVING REQUIREMENTS
C ELDERLY
C FAMILIES
B *LOADING ZONES
U ZONING REQUIREMENTS
R TRUCKS, TRUCKING
R PARKING
B *LOAN AND GRANT
USE *GRANTS
B *LOAN, GRANT APPLIC
U RENEWAL PLANNING
M PART I
M PART II
USE ONLY FOR DOCUMENTS REQUIRED BY HUD FROM THE LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B *LOANS
U FINANCIAL ASSISTANCE
C REHABILITATION ASSIST
C LOW-INTEREST
M DIRECT
B *LOBBYING
U POLITICS
R LEGISLATION
S LOCAL
S COMMUNICATIONS
S POWER
S STREETS
S TRANSPORT SYSTEMS
S WATER SYSTEMS
P TRANSPORTATION
P LEGISLATION
IN TERMS OF GOVERNMENT, REFERS TO TOWNS OR OTHER MINOR CIVIL DIVISIONS OTHER THAN LEGAL MUNICIPALITIES. ALSO USED TO INDICATE CHARACTERISTICS RELEVANT TO AREAS THAT ARE EQUAL TO, OR SMALLER THAN, CITIES
B *LOCAL CITY HALLS
R SOCIAL SERVICES
R NEIGHBORHOOD SERVICE CENTER
B *LOCAL CONTRIBUTION

```
        U  FINANCIAL SOURCES
        D  PUBLIC IMPROVEMENTS
        N  NON-CASH
        REFERS SPECIFICALLY TO URBAN RENEWAL REQUIREMENTS FOR
        CITIES TO SHARE IN THE COST OF THEIR RENEWAL PROGRAMS
B   *LOCAL GOVERNMENT
        U  SUB-NATIONAL GOVERNMENT
        D  TOWN MEETINGS
        REFERS TO THE GOVERNMENT OF TOWNS + OTHER MINOR CIVIL
        DIVISIONS THAT ARE NOT INCLUDED IN LEGAL
        MUNICIPALITIES
B   *LOCAL PUBLIC AGENCY
     USE  *LPA
B   *LOCAL TRANSPORTATION
     USE  *CIRCULATION
B   *LOCATION
        F  SITE SELECTION
        U  SPATIAL ANALYSIS
        U  PHYSICAL PLANNING
        R  LAND USE
        C  RECREATIONAL FACILITIES
        R  URBAN FORM
        R  DENSITY
        R  DISTRIBUTION
        C  SCHOOLS
        C  CENTRES
        P  INDUSTRY
        P  MANUFACTURING
        R  SCATTERED SITE HOUSING
        CONCERNED WITH THE FACTORS INVOLVED IN SELECTING
        THE PLACE FOR A BUILDING, FACILITY OR DEVELOPMENT.
        USE AS A MODIFIER AS WELL AS DESCRIPTOR.
B   *LOCATION THEORY
        U  URBAN GEOGRAPHY
        1965      PITTSBURGH UNIV.  CENTER FOR REGIONAL
        ECONOMIC STUDIES.  SUBJECT HEADING LIST
B   *LOFTS
        U  BUILDINGS/MULTI-PURPOSE
        R  ARTISTS QUARTERS
S    LONG-DISTANCE
        O  SHORT-DISTANCE
S    LONG-RANGE
     USE  SHORT//LONG-RANGE
B   *LOT SIZE
        U  LOTS, PARCELS
        U  ZONING REQUIREMENTS
        R  SUBDIVISION REGULATIONS
B   *LOTS, PARCELS
        F  PARCELS
        F  PLOT
        D  FRONTAGE
        D  BUILDING LINE
        D  YARDS
        D  LOT SIZE
        R  VACANT LAND
        R  STREET ADDRESSES
B   *LOW-COST HOUSING
B   *LOW-COST LOANS
        R  MORTGAGE FINANCING
        R  INSURANCE RATES
B   *LOW-INCOME
        U  MODERATE-INCOME
        U  INCOME-LEVEL
        C  HOUSING
        C  HOUSING PROGRAMS
        C  HOUSING STOCK
        USE WITH DISCRETION AS MODIFIER. USE PRIMARILY AS
```

DESCRIPTOR.

B *LOW-INTEREST
U FINANCIAL ASSISTANCE
U INTEREST
R MORTGAGE INSURANCE
C LOANS

B *LOW-RENT HOUSING
U HOUSING ASSIST
U HOUSING PROGRAMS
D TURNKEY
D LEASED HOUSING
D USED HOUSING
R PUBLIC HOUSING
REFERS TO NON-PROJECT HOUSING ADMINISTERED BY HOUSING AUTHORITIES AS ALTERNATIVES TO PUBLIC HOUSING PROJECTS AND TO PROGRAMS FOR ENCOURAGING THEM

B *LOW-RISE
USE *SCALE

B *LPA
F LOCAL PUBLIC AGENCY
F REDEVELOPMENT AUTHORITY
U AGENCIES
R RENEWAL
REFERS TO THE AGENCY IN THE MUNICIPALITY OR OTHER MINOR CIVIL DIVISION THAT ADMINISTERS STATE OR FEDERAL RENEWAL PROGRAMS IN THAT AREA

B *LPA LETTER
USE *DRAA.LP

B *LUMBERING
R FORESTS, FORESTRY

B *MACROECONOMICS
U ECONOMETRICS
C MICROECONOMICS

B *MAINTENANCE CODES
U CODES
R CODE ENFORCEMENT ASSIST

B *MALE
USE *SEX

B *MALLS
U URBAN DESIGN
R ARCADES
R PLAZAS
R OVERHANG
R FLOORSCAPE
IN PRESENT USAGE, USUALLY FOR A WALK-WAY IN A A COMMERCIAL AREA

B *MAN
F HUMAN ECOLOGY
U URBAN ENVIRONMENT
D PHYSIOLOGY
D PSYCHOLOGY
D LIFE STYLE
R SOCIOLOGY
REFERS TO THE INDIVIDUAL + HIS NEEDS

B *MANAGEMENT

B *MANAGEMENT SCIENCE
D OPERATIONS RESEARCH
D PERT
D RECORDS MANAGEMENT
D SIMULATIONS
D SYSTEMS ANALYSIS
D EXECUTIVES
D SYSTEMS MANAGEMENT
D PPBS
D CPM
R DECISION MAKING
R INFORMATION SYSTEMS

R PROGRAMMING
INCLUDES MANAGEMENT INFORMATION SYSTEMS

B *MANPOWER
F TECHNICAL MANPOWER
U ECONOMIC BASE
U LABOR
D OLDER WORKERS
D EQUAL OPPORTUNITIES
N ALLOCATION
N UTILIZATION
R CAREER DEVELOPMENT
R LABOR FORCE
R SKILLED-UNSKILLED
USE FOR QUANTITATIVE DISCUSSIONS OF LABOR SUPPLY AND DEMAND

B *MANUAL SYSTEMS
R DATA PROCESSING

B *MANUALS
F HANDBOOKS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *MANUFACTURING
U INDUSTRY
D APPAREL, RELATED PRODUCTS
D PRINTING, PUBLISHING
D TEXTILE INDUSTRIES
R SMALL BUSINESS
P LOCATION
COVERS THOSE ACTIVITIES REPORTED IN THE CENSUS OF MANUFACTURERS

B *MAPPING
U GRAPHICS
D GRIDS
R AREA MEASUREMENT
INCLUDES CARTOGRAPHY

B *MAPS
U GRAPHIC DISPLAYS
U FORMATS
D ATLASES
D BASE MAPS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *MARINAS
U RECREATIONAL FACILITIES
U BOATING
R WATERFRONTS

B *MARINE TRANSPORT
U TRANSPORTATION
D HYDROFOILS
D PORTS
R SHIPS
THE MOVEMENTS OF PEOPLE OR GOODS BY WATER. FOR THE COMMERCIAL ASPECTS, USE SHIPS, SHIPPING

B *MARITIME

B *MARKET
F DEMAND
F SUPPLY
U HOUSING ECONOMICS
U COMMERCE
P HOUSING
M FORECASTS
M COMMERCIAL
M INDUSTRIAL
M RESIDENTIAL
C HIGH-INCOME
C LOW-INCOME
C MIDDLE-INCOME
R TRANSPORTATION ECONOMICS

B *MARKET (CONT)
USE FOR INTERACTION OF SUPPLY AND DEMAND, OR FOR ANY ONE OF THE ELEMENTS, ACTUAL OR POTENTIAL. INCLUDES MARKET AREA
B *MARKET ANALYSES
B *MARKET VALUE
U LAND VALUES
U VALUATION
B *MARKETING
R REAL ESTATE BUSINESS
R DEVELOPMENTS
INCLUDES MARKETABILITY
B *MARKETS
U BUILDINGS/COMMERCIAL
U COMMERCIAL AREAS
M RETAIL
M WHOLESALE
B *MARRIAGE
U VITAL STATISTICS
R FAMILIES
B *MASS TRANSP. DEMO REPORTS
F MASS TRANSPORTATION DEMO REPORTS
U FORMATS (CONTD)
APPLIES TO PROJECTS FUNDED BY HUD UNDER SECTION 1C3B, HOUSING ACT OF 1949, AS AMENDED BY SECTION 303, HOUSING ACT OF 1961
B *MASS TRANSPORTATION
U TRANSPORTATION
D RESIDENTIAL COLLECTION
D COMMUTING
R RAPID TRANSIT
REFERS TO THE PROBLEM RATHER THAN TO THE PHYSICAL SYSTEMS OFFERED AS SOLUTION
B *MASS TRANSPORTATION DEMO REPORTS
USE *MASS TRANSP. DEMO REPOR
TERM SHORTENED, JANUARY 1969.
B *MASTER PLANS
F OFFICIAL PLANS
R OFFICIAL MAPS
R COMPREHENSIVE PLANS
USE ONLY FOR PLANS WHICH HAVE BEEN OFFICIALLY ADOPTED BY A POLITICAL JURISDICTION
B *MATERIALS
USE *BUILDING TECHNOLOGY
B *MATHEMATICAL ANALYSIS
F MULTIPLE REGRESSION ANALYSIS
U ANALYTIC TECHNIQUE
D PROBABILITY
P ECONOMICS
C SIMULATIONS
R FACTOR ANALYSIS
B *MATRIX
U GRAPHIC DISPLAYS
U ANALYTIC TECHNIQUE
THE GRAPHIC PRESENTATION OF EITHER ALPHABETIC OR NUMERIC DATA IN A COMBINATION OF HORIZONTAL + VERTICAL RELATIONSHIPS
S MEASUREMENTS
B *MEDICAL CENTERS
U HEALTH FACILITIES
B *MEDICAL SERVICES
U HEALTH SERVICES
R DENTAL SERVICES
B *MEGALOPOLIS
U CITIES, TOWNS
U REGIONS
D CONURBATION

B *MEGASTRUCTURES
U BUILDINGS
B *MENTAL HEALTH
R PSYCHOLOGY
R MENTAL HEALTH SERVICES
R SOCIAL PATHOLOGY
B *MENTAL HEALTH SERVICES
U HEALTH SERVICES
R MENTAL HEALTH
B *MERCHANT MARINE
USE *SHIPS
B *METABOLISM
USE *ENVIRONMENTAL PROTECTIO
S METERED
S PARKING
S WATER SYSTEMS
B *METHODOLOGY
D SAMPLING
D SURVEYS
SHOULD NOT BE USED WHERE THE IDEA OF METHODOLOGY IS
IMPLICIT IN THE DESCRIPTOR ITSELF
B *METROPOLIS
U CITIES, TOWNS
S METROPOLITAN
B *METROPOLITAN AREA FINANCE
U PUBLIC FINANCE
B *METROPOLITAN AREA GOVT
U SUB-NATIONAL GOVERNMENT
D INCORPORATION
USE ONLY FOR DOCUMENTS ABOUT ACTIVITIES COVERING A
SINGLE SMSA
B *METROPOLITAN AREA PLAN
R PLANNING UNIT
R SERVICE AREAS
C SMSA
R REGIONAL PLANNING
ABBREVIATION FOR METROPOLITAN AREA PLANNING
USE ONLY FOR DOCUMENTS ABOUT ACTIVITIES COVERING A
SINGLE SMSA
B *METROPOLITAN AREAS
U REGIONS
R CONNURBATION
ROUGHLY THE EQUIVALENTS OF THOSE AREAS DEFINED BY THE
BUREAU OF THE BUDGET AS STANDARD METROPOLITAN
STATISTICAL AREAS
B *METROPOLITAN DESK
U INTERGOVERNMENTAL RELATIONS/FEDERAL-CITY
R HUD
B *METROTOWNS
USE *CENTRES
B *MEWS
U STREETS
B *MICROECONOMICS
U ECONOMETRICS
D MACROECONOMICS
B *MIDDLE CLASSES
R MIDDLE-INCOME
B *MIDDLE-INCOME
U INCOME-LEVEL
R MIDDLE CLASSES
C HOUSING
C HOUSING PROGRAMS
C HOUSING STOCK
C MARKET
USE WITH DISCRETION AS MODIFIER. USE PRIMARILY AS
DESCRIPTOR.
B *MIGRATION

F IMMIGRATION
U DEMOGRAPHIC FACTORS
M INWARD
M OUTWARD

B *MIGRATORY WORKERS
U SPECIAL GROUPS

B *MILITARY
USE *DEFENSE

B *MINING AND EXTRACT IND
F MINING AND EXTRACTIVE INDUSTRIES
U RESOURCE PRODUCTION
C QUARRYING
R NATURAL RESOURCES
R LAND USE
R RECLAIMATION
R GEOLOGICAL RESOURCES

B *MINING AND EXTRACTIVE INDUSTRIES
USE *MINING AND EXTRACT IND

B *MINORITY GROUPS
U SPECIAL GROUPS
C INDIANS
C JAPANESE AMERICANS
C NEGROES
C PUERTO RICANS
R GHETTOS
R ETHNICITY
R NATIVITY
R RACE RELATIONS
M RIGHTS
R INTEGRATION

B *MINORITY GROUPS HOUSING
USE *OPEN HOUSING

S MIXED PURPOSES
S LAND USE

B *MOBILE HOUSING
U TRANSIENT HOUSING
R PIGGY-BACK HOUSING
R ZONING DISTRICTS
R ZONING ADMINISTRATION
R TEMPORARY HOUSING
RESTRICT USE TO TRAILERS AND TRAILER PARKS IN WHICH THEY ARE LOCATED

B *MOBILITY

S MODEL
S APARTMENTS
S HOUSES
S LEGISLATION
USED AS INDICATION THAT A STRUCTURE OR CONCEPT IS EXEMPLARY

B *MODEL CITIES PROGRAM
U URBAN DEVELOPMENT
C MODEL NEIGHBORHOODS
R COMMUNITY COUNCILS
R POVERTY PROGRAMS
R COMMUNITY PLANNING
R DEMONSTRATION PLANNING
R DESIGN STANDARDS
R PROGRAM STANDARDS
R NEW COMMUNITIES
C RECREATION PROGRAMS
TERM BECAME GENERAL USAGE DURING 1966. DEMONSTRATION CITIES WAS USED BEFORE THAT TIME.

B *MODEL LEGISLATION
U LEGISLATION

B *MODEL NEIGHBORHOODS
U MODEL CITIES PROGRAM

B *MODELS

```
        D  TRANSPORTATION MODELS
        D  GRAVITY MODELS
        R  SIMULATIONS
        C  DATA PROCESSING
        IMPLIES A MATHEMATICAL STRUCTURE. COORDINATE WITH
        *DATA PROCESSING WHEN THE USE OF COMPUTERS IS INVOLVED
B   *MODERNIZATION
     USE  *RENOVATION
B   *MODULAR COORDINATION
        U  BUILDING TECHNOLOGY
        U  VISUAL ELEMENTS
B   *MONITORING
        F  ALERTING
        R  INDICATORS
        R  CONTROL SYSTEMS
B   *MONOGRAPHS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B   *MONOPOLIES
S    MONTHLY
B   *MONUMENTS
        U  ART
        R  SCULPTURE
        INCLUDES FOUNTAINS AND ORNAMENTAL POOLS
B   *MORES
        F  ATTITUDES
        F  BEHAVIOR
        F  COMMUNITY VALUES
        F  CULTURAL PATTERNS
B   *MORPHOLOGY
     USE  *PLANNING PROCESS
B   *MORTALITY
     USE  *VITAL STATISTICS
B   *MORTGAGE FINANCING
        D  AMORTIZATION
        R  FHA
        R  HOME OWNERSHIP PROGRAMS
        R  LOW-COST LOANS
        R  BUILDING AND LOAN ASSOCIATIONS
        R  SAVINGS BANKS
        INCLUDES THE FOLLOWING FHA INSURANCE PROGRAMS, 220,
        221-D-3, 236 AND 203-I
B   *MORTGAGE INSURANCE
        U  FINANCIAL ASSISTANCE
        D  FHA
        R  LOW-INTEREST
        R  INSURANCE RATES
B   *MORTGAGES
        D  FNMA
        D  FORECLOSURES
        C  INTEREST
        R  REFINANCING
        C  AMORTIZATION
B   *MOTELS
     USE  *HOTELS, MOTELS
B   *MOTHERS
        U  SPECIAL GROUPS
B   *MOTION PICTURES
     USE  *ENTERTAINMENT
B   *MOVING PLATFORMS
        U  SIDEWALKS
S    MULTI-FAMILY
        O  SINGLE-FAMILY
        S  HOUSING STOCK
        P  HOUSES
S    MULTI-PURPOSE
        S  BUILDINGS
```

S DEVELOPMENTS
S LAND USE
INCLUDES THE CONCEPT OF MIXED USE
B *MULTIPLE DWELLINGS
U BUILDINGS/RESIDENTIAL
D APARTMENTS
D ROOMS, ROOMING HOUSES
D ROOMS
D TENEMENTS
R HOUSING STOCK/MULTI-FAMILY
P HOUSING
USUALLY USED TO INDICATE THE RESIDENTIAL PROPERTY
AFFECTED BY BUILDING CODES
B *MULTIPLE REGRESSION ANALYSIS
USE *MATHEMATICAL ANALYSIS
B *MULTIPLIER ANALYSIS
USE *ANALYTIC TECHNIQUE
S MUNICIPAL
F INTERMUNICIPAL
S INTERGOVERNMENTAL RELATIONS
S LEGISLATIVE BODIES
S LEGISLATION
S LEGISLATIVE HISTORY
S PERIODIC REPORTS
S AGENCIES
B *MUNICIPAL BONDS
R BOND ISSUES
B *MUNICIPAL FINANCE
U PUBLIC FINANCE
D REAL PROPERTY TAXES
B *MUNICIPAL GOVERNMENT
U SUB-NATIONAL GOVERNMENT
D ANNEXATION
D CITY MANAGER PLAN
D COUNCIL-MANAGER PLAN
D COMMISSION PLAN
B *MUNICIPAL LEAGUES
U QUASI-GOVERNMENTAL
B *MUNICIPAL OFFICIALS
USE *PUBLIC OFFICIALS
B *MURALS, DECORATIONS
U ART
B *MUSEUMS
U CULTURAL ACTIVITIES
R NATURAL SCIENCE
R GRAPHIC ARTS
B *MUSIC
USE *PERFORMING ARTS
INCLUDES THE STUDY AS WELL AS THE PERFORMANCE
B *NARCOTIC ADDICTION
USE *SOCIAL PATHOLOGY
B *NATALITY
USE *VITAL STATISTICS
NATALITY IS THE BIRTH RATE ASPECTS OF VITAL STATISTICS
S NATIONAL
P INCOME
R FEDERAL
S ECONOMIC DEVELOPMENT
USED TO INDICATE COUNTRY WIDE CONSIDERATIONS,
NON-GOVERNMENTAL IN NATURE.
FOR FOREIGN MATERIALS, APPLIES TO GOVERNMENTAL AND
NON-GOVERNMENTAL. FOR U.S. MATERIALS, APPLIES
PRIMARILY TO NON-GOVERNMENTAL.
B *NATIONAL DEFENSE
USE *DEFENSE
B *NATIONAL INCOME
U ECONOMIC CONDITIONS

B *NATIONAL PARKS
U OUTDOOR RECREATION
R PARKS
R STATE PARKS
B *NATIONAL PLANNING
R ECONOMIC DEVELOPMENT
R ECONOMIC POLICY
B *NATIVITY
U POPULATION CHARACTERISTICS
R MINORITY GROUPS
S NATURAL
B *NATURAL DISASTERS
USE *DISASTERS
B *NATURAL RESOURCES
D AIR RESOURCES
D BOTANICAL FEATURES
D CLIMATE
D ECOLOGY
D GEOLOGICAL RESOURCES
D SOILS
D TOPOGRAPHICAL FEATURES
D WATER RESOURCES
D DEPLETED AREAS
R ECOLOGICAL STUDIES
R MINING AND EXTRACT IND
B *NATURAL RESOURCES (CONT)
R RESOURCE PRODUCTION
M ALLOCATION
M UTILIZATION
R CONSERVATION
INCLUDES ALL THE ELEMENTS OF THE NATURAL ENVIRONMENT AS THEY EFFECT URBAN AND URBAN-RELATED AFFAIRS. ALSO INCLUDES THE CONSERVATION OF THESE ELEMENTS.
B *NATURE EXHIBITS
U CULTURAL ACTIVITIES
D AQUARIUMS
D BOTANICAL GARDENS, ARBORETUMS
D PLANETARIA
D ZOOS
R PARKS
1964 STANDARD LAND USE CODING MANUAL
B *NEGROES
U MINORITY GROUPS
B *NEIGHBORHOOD ANALYSES
R WORKABLE PROGRAM
REQUIRED ELEMENT OF THE WORKABLE PROGRAM REPORT
B *NEIGHBORHOOD CENTERS
USE *COMMUNITY CENTERS
B *NEIGHBORHOOD DEVEL PROG
F NEIGHBORHOOD DEVELOPMENT PROGRAMS
R RENEWAL AREAS
03/31/69 HOUSING AND URBAN DEVELOPMENT ACT OF 1968
B *NEIGHBORHOOD DEVELOPMENT PROGRAMS
USE *NEIGHBORHOOD DEVEL PROG
B *NEIGHBORHOOD FACILITIES
USE *COMMUNITY FACILITIES
B *NEIGHBORHOOD PARKS
U PARKS
B *NEIGHBORHOOD PLANNING
USE *COMMUNITY PLANNING
B *NEIGHBORHOOD SERVICE CENTER
U COMMUNITY FACILITIES
R SOCIAL SERVICES
R LOCAL CITY HALLS
PRIOR TO OCT. 1968, THE TERM SERVICE CENTERS WAS USED
B *NEIGHBORHOODS
USE SPARINGLY FOR CITY SECTIONS THAT ARE DEFINABLE BY

```
        ONE OR MORE FEATURES. LIMITED TO A FEW BLOCKS
S   NET
        O  GROSS
B   *NETWORKS
        D  NODES
        D  LINKAGE
        C  INFORMATION SYSTEMS
        C  COMMUNICATIONS
        C  POWER
        C  SEWERAGE
        C  TRANSPORTATION
        C  WATER SYSTEMS
        R  SYSTEMS
B   *NEW COMMUNITIES
        U  DEVELOPMENTS
        M  IN-CITY
        P  NEW TOWNS
        R  RENEWAL AREAS
        R  INDUSTRIAL AREAS
        R  COMMERCIAL AREAS
        R  RESIDENTIAL AREAS
        R  COMMUNITY PLANNING
        R  MODEL CITIES PROGRAM
B   *NEW LAW//OLD LAW
     USE  *TENEMENTS
B   *NEW TOWN-IN TOWN
        F  IN TOWN-NEW TOWN
        R  RENEWAL AREAS
B   *NEW TOWNS
        U  DEVELOPMENTS/MULTI-PURPOSE
        U  DEVELOPMENTS/RESIDENTIAL
        U  PLANNED COMMUNITIES
        R  GARDEN CITIES
        R  SUBURBS
        R  CENTRES
        P  NEW COMMUNITIES
B   *NEWS ITEMS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.  ONLY
        WHERE ARTICLE OR REPORT IS EXPECTED TO BE SUPERSEDED.
B   *NEWSLETTERS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B   *NEWSPAPERS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B   *NODES
        U  NETWORKS
        R  TERMINALS
        R  LINKAGE
        1960      LYNCH, KEVIN.  THE IMAGE OF THE CIT.
B   *NOISE
     USE  *SOUND
S    NON-ASSISTED
        R  PRIVATE
        O  PUBLICLY ASSISTED
        S  RENEWAL
S    NON-CASH
        O  CASH
        S  LOCAL CONTRIBUTION
S    NON-CIVIL SERVICE
B   *NON-CONFORMANCE
        F  OBJECTIONABLE USES
        U  ZONING ADMINISTRATION
        O  CONFORMANCE
        R  APPEALS
        R  VARIANCES
```

```
S   NCN-MANUFACTURING
S   NCN-PROFESSIONAL
S   NCN-PROFIT
B  *NCN-PROFIT HOUSING
        R  HOUSING PROGRAMS
        R  DEVELOPMENT CORPORATIONS
        R  SPONSORS
S   NCN-RESIDENTIAL
        USE ONLY FOR COMMERCIAL INDUSTRIAL, ETC.  ASPECTS
        OF A PREDOMINANTLY RESIDENTIAL AREA
S   NCN-URBAN
B  *NCN-WHITES
    USE  *MINORITY GROUPS
S   NORMS
B  *NUCLEAR ENERGY
        U  POWER
B  *NUISANCES
        U  URBAN ENVIRONMENT
        D  AIR POLLUTION
        D  SOUND
        D  WATER POLLUTION
        M  ABATEMENT
        P  CONTROLS
        R  ENVIRONMENTAL PROTECTION
B  *NURSERY SCHOOLS
        U  EDUCATION/PRE-SCHOOL
B  *NURSING HOMES
        U  HEALTH FACILITIES
        R  RETIREMENT HOMES
B  *OBJECTIONABLE USES
    USE  *NON-CONFORMANCE
B  *OBSOLESCENCE
        U  BUILDING CONDITIONS
        R  DILAPIDATION
        R  DETERIORATION
B  *OCCUPANCY//VACANCY
        U  HOUSING STOCK
B  *OCCUPATIONS
        F  VOCATIONS
B  *OEO
        F  OFFICE OF ECONOMIC OPPORTUNITY
        R  POVERTY PROGRAMS
S   OFF-STREET
        S  PARKING
        O  ON-STREET
B  *OFFICE OF ECONOMIC OPPORTUNITY
    USE  *OEO
B  *OFFICES
        U  BUILDINGS/COMMERCIAL
        U  COMMERCIAL AREAS
        1964      INFORM DESCRIPTORS
B  *OFFICIAL MAPS
        U  PLANNING LAW
        U  LAND USE CONTROLS
        R  MASTER PLANS
B  *OFFICIAL PLANS
    USE  *MASTER PLANS
B  *OLDER WORKERS
        U  MANPOWER
        R  ELDERLY
B  *OMBUDSMAN
        R  PUBLIC OFFICIALS
        R  LEGAL ASSISTANCE
        A PUBLIC OFFICIAL WHOSE FUNCTION IS TO PROVIDE ADMIN-
        ISTRATIVE REDRESS FOR CITIZEN GRIEVANCES.
S     -LINE
        S  COMPUTERS
```

S ON-STREET
     S PARKING
     O OFF-STREET
B *OPEN HOUSING
     F FAIR HOUSING
     F MINORITY GROUPS HOUSING
     U HOUSING
     D BLOCKBUSTING
     O GHETTOS
     R CIVIL RIGHTS
B *OPEN SPACE
     O GREEN BELTS
     O BLOCK INTERIORS
     R VACANT LAND
     M IN-CITY
     R URBAN FORM
     C PLANNED UNITS
     LAND WITHIN OR WITHOUT AN URBAN AREA TO BE
     MAINTAINED OR CLEARED FOR RECREATION OR BEAUTIFICATION
B *OPEN SPACE PLANS
     U COMPREHENSIVE PLANS
     R RECREATION PLANS
B *OPEN SPACE RATIO
     U ZONING REQUIREMENTS
     R SET-BACK
     R SITE PLANNING
B *OPERATIONS RESEARCH
     U MANAGEMENT SCIENCE
     R PROGRAMMING
B *ORDINANCES
   USE *LEGISLATION/MUNICIPAL
     FOR ZONING ORDINANCES, SEE DESCRIPTOR ZONING
     ORDINANCES.
B *ORGANIZATION CHARTS
B *ORIGIN//DESTINATION
     U TRIPS
B *OUTDOOR RECREATION
     U RECREATION
     O CAMPS, CAMPING
     O NATIONAL PARKS
     O PARKS
     O SPORTS ACTIVITIES
     O STATE PARKS
     O BOATING
     R RECREATIONAL FACILITIES
     R RECREATION AREAS
     R RECREATIONAL TRIPS
     DOES NOT INCLUDE THE FACILITIES THAT ARE PART
     OF NATURE EXHIBITS
S OUTLYING
     O INLYING
     USE ALSO FOR OUTER
S OUTWARD
     O INWARD
     S MIGRATION
B *OVERCROWDING
     U LIVABILITY
     U DENSITY
B *OVERHANG
     F AWNINGS
     U BUILDINGS
     R WALLS
     R SIGNS, BILLBOARDS
S OWNER-BUILT
     S HOUSES
     S APARTMENTS
     S BUILDINGS

B *OWNER-OCCUPANCY
U TENURE
B *PAMPHLETS
USE *BROCHURES
B *PARCELS
USE *LOTS, PARCELS
B *PARK AND RIDE
USE *RESIDENTIAL COLLECTION
U MASS TRANSPORTATION
B *PARKING
U CIRCULATION ELEMENTS
U ZONING REQUIREMENTS
N OFF-STREET
N ON-STREET
N METERED
R LOADING ZONES
C CIRCULATION PLANS
R PARKING FACILITIES
B *PARKING FACILITIES
R PARKING
R GARAGES
B *PARKING/OFF-STREET
USE *PARKING
D GARAGES
FULL SUBSTITUTION PARKING/OFF-STREET
B *PARKS
U OUTDOOR RECREATION
D NEIGHBORHOOD PARKS
D VESTPOCKET PARKS
R NATURE EXHIBITS
R NATIONAL PARKS
R STATE PARKS
C PLANS
USE FOR LOCAL AND COUNTY AREAS
B *PARKWAYS
U HIGHWAYS
R RECREATIONAL TRIPS
S PART I
S CAPITAL GRANT APPLIC
S GNRP APPLIC
S LOAN, GRANT APPLIC
S SURVEY, PLANNING APPLIC
S PART II
S CAPITAL GRANT APPLIC
S GNRP APPLIC
S LOAN, GRANT APPLIC
S SURVEY, PLANNING APPLIC
B *PATENTS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B *PATHS
F TRAILS
U STREETS
U PEDESTRIANWAYS
R SITE PLANNING
R CIRCULATION
B *PATIO HOUSES
U ATTACHED HOUSES
R GARDEN APRIMENTS
R ROW HOUSES
B *PAYMENTS
B *PEAK PERIODS
TO BE USED PRIMARILY BUT NOT SOLELY WITH
TRANSPORTATION TERMS
B *PEDESTRIANS
U CIRCULATION
R MALLS

R SIDEWALKS
R PATHS
B *PEDESTRIANWAYS
D PATHS
R STREETS
C CIRCULATION
C SITE PLANNING
B *PENSION FUNDS
U FINANCIAL SOURCES
S PER CAPITA
B *PERFORMANCE
P STANDARDS
B *PERFORMANCE STANDARDS
A CRITERION ESTABLISHED TO CONTROL NOISE, ODOR, SMOKE,
VIBRATION, FIRE HAZARDS, AND GLARE OF HEAT GENERATED
BY OR INHERENT IN, USES OF LAND OR BUILDINGS
B *PERFORMING ARTS
F CINEMA
F DANCE
F DRAMA
F MUSIC
U CULTURAL ACTIVITIES
R THEATERS
R ENTERTAINMENT
R CENTRES
B *PERIODIC REPORTS
U FORMATS
M FEDERAL
M MUNICIPAL
M STATE
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
FOR AGENCY REPORTS, MODIFY APPROPRIATE DESCRIPTOR BY
ADMINISTRATION, I.E. TRANSPORT SYSTEMS/ADMINISTRAT-
ION, URBAN PLANNING/ADMINISTRATION
B *PERIODICAL LISTS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B *PERSON IDENTIFICATION
R DATA BANKS
R CONFIDENTIALITY
S PERSONAL
S INCOME
S INCOME TAX
USED TO MODIFY INCOME
B *PERSONAL PROPERTY
B *PERT
U MANAGEMENT SCIENCE
R PROGRAMMING
R WORK PROGRAMMING
PROGRAM EVALUATION REVIEW TECHNIQUES
B *PESTS
F RODENTS
U BUILDING CONDITIONS
INCLUDES CONTROLS
B *PETROLEUM INDUSTRY
U RESOURCE PRODUCTION
B *PHA
F PUBLIC HOUSING ADMINISTRATION
U HUD
U.S. PUBLIC HOUSING ADMINISTRATION
B *PHOTOGRAMMETRY
B *PHOTOGRAPHS
U GRAPHIC DISPLAYS
B *PHOTOGRAPHY
M AERIAL
B *PHYSICAL PLANNING
D SITE PLANNING

D LOCATION
R COMPREHENSIVE PLANNING
R LAND USE PLANS
R URBAN DESIGN
R URBAN FORM

B *PHYSICAL SCIENCES
D ENGINEERING

B *PHYSIOGRAPHY
R CLIMATE
R SOILS
R WATER RESOURCES
R GEOLOGICAL RESOURCES

S PHYSIOLOGICAL
S IMPACT

B *PHYSIOLOGY
U MAN

B *PIGGY-BACK
USE *CONTAINER SYSTEMS

B *PIGGY-BACK HOUSING
U BUILDING TECHNOLOGY
R MOBILE HOUSING

B *PILOT PROJECTS
USE *DEMONSTRATIONS

B *PIPE LINES
R GAS

B *PLAN IMPLEMENTATION
D ZONING
D CIP

B *PLAN REVIEWS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHEN APPLICABLE

B *PLANETARIA
U NATURE EXHIBITS

B *PLANNED COMMUNITIES
U URBAN PLANNING
D NEW TOWNS
R DEVELOPMENTS
REFERS TO THOSE DEVELOPMENTS THAT THE PLANNING PROFESSION CONSIDERS AS REASONABLY WELL-PLANNED

B *PLANNED UNITS
R CLUSTERS
R CONDOMINIUMS
C OPEN SPACE
C LAND OWNERSHIP
R COOPERATIVES

B *PLANNERS
U PROFESSIONS
U PLANNING PROFESSION
P EDUCATION
P SOCIETIES

B *PLANNING

B *PLANNING ADMINISTRATION
U PUBLIC ADMINISTRATION
U ADMINISTRATION
D PLANNING COMMISSIONS
D AGENCIES
R PLANNING UNIT
R ADMINISTRATIVE ORGANIZATION
REFERS TO THE PLANNING FUNCTION OF GOVERNMENT AND TO ITS EFFECTUATION, INCLUDES DISCUSSIONS OF AUTHORITY AND JURISDICTION. DO NOT ORDINARILY USE FOR PERIODIC REPORTS. USE, INSTEAD URBAN PLANNING, STATE PLANNING, ETC. WITH SUBDESCRIPTOR-ADMINISTRATION

B *PLANNING ANALYSIS
D CLASSIFICATION
D COMPARATIVE STUDIES
D FEASIBILITY STUDIES

D IMPACT
D INDICATORS
M IMPLEMENT

B *PLANNING COMMISSIONS
U PLANNING ADMINISTRATION
U AGENCIES

B *PLANNING EDUCATION
U PLANNING PROFESSION

B *PLANNING LAW
U LAW, LAWS
D CODES
D MASTER PLANS
D OFFICIAL MAPS
D SPECIAL USES
D SUBDIVISIONS
D ZONING ORDINANCES
REFERS TO THE LEGAL POWERS OF THE MUNICIPALITY TO EFFECTUATE LAND USE PLANNING

B *PLANNING LIBRARIES
U PLANNING PROCESS
R LIBRARIES

B *PLANNING PROCESS
F MORPHOLOGY
D DATA
D FORECASTING
D GOALS
D PLANNING LIBRARIES
D ALTERNATIVES
D DECISION MAKING
R MANAGEMENT SCIENCE
R COMPREHENSIVE PLANNING

B *PLANNING PROFESSION
U PROFESSIONS
D PLANNERS
D PLANNING EDUCATION
M SOCIETIES

B *PLANNING PROGRAMMING BUDGETING SYSTEM
USE *PPBS

B *PLANNING UNIT
R METROPOLITAN AREA PLAN
R REGIONAL PLANNING
R SCALE
R PLANNING ADMINISTRATION
R SERVICE AREAS
TO BE USED WHERE THERE IS DISCUSSION OF SIZE OR OTHER CONSIDERATIONS TO DETERMINE PHYSICAL SIZE OF UNIT

B *PLANS
U FORMATS

B *PLANT LIFE
USE *BOTANICAL FEATURES

B *PLATTING
USE *SUBDIVISIONS

B *PLAY AREAS
U RECREATIONAL FACILITIES
INCLUDE PLAYGROUNDS, TOT LOTS, ETC

B *PLAYFIELDS
F ATHLETIC FIELDS
U RECREATIONAL FACILITIES
INCLUDES BASEBALL DIAMONDS, BALL COURTS, BUT NOT GOLF COURSES

B *PLAZAS
R ARCADES
R MALLS
R SQUARES

B *PLOT
USE *LOTS, PARCELS

B *PLUMBING
U BUILDING EQUIPMENT
B *POLICE FACILITIES
U PUBLIC SAFETY
U COMMUNITY FACILITIES
U LAW ENFORCEMENT
B *POLICE PLANNING
B *POLICE POWER
U LAND USE CONTROLS
B *POLITICAL SCIENCE
U SOCIAL SCIENCES
D LAW, LAWS
D POLITICS
D PUBLIC ADMINISTRATION
D PUBLIC FINANCE
D CIVIL RIGHTS
D DEMOCRACY
B *POLITICAL SCIENTISTS
B *POLITICS
U POLITICAL SCIENCE
D ELECTIONS
D REAPPORTIONMENT
D REFERENDUM
D TOWN MEETINGS
D VOTING
R LEADERSHIP
R PROTEST ACTION
R SUPERSTRUCTURE
R ADVOCACY PLANNING
INCLUDES THE WHOLE POLITICAL PROCESS, NOT JUST LIMITED TO POLITICAL ACTIVITIES
B *POOLS
U RECREATIONAL FACILITIES
U SWIMMING
INCLUDES BOTH COMMUNITY AND FAMILY POOLS, BUT NOT ORNAMENTAL ONES, WHICH ARE INCLUDED IN MONUMENTS
S POPULAR
B *POPULATION
U DEMOGRAPHY
R DECENTRALIZATION
USED ALONE, INDICATES CURRENT POPULATION COUNT
B *POPULATION CHARACTERISTICS
U DEMOGRAPHY
D INCOME-LEVEL
D ETHNICITY
D VITAL STATISTICS
D SEX
D SOCIO-ECONOMIC STATUS
D FAMILY SIZE
B *POPULATION PROJECTIONS
U DYNAMIC PROCESS
U DEMOGRAPHY
B *PORTS
U MARINE TRANSPORT
C TERMINALS
R WATERFRONTS
INCLUDES BOTH NATURAL AND MAN-MADE FEATURES
B *POSTAL SERVICES
U GOVERNMENTAL SERVICES
C ZONES
B *POVERTY PROGRAMS
F ANTI-POVERTY PROGRAMS
U SOCIAL PLANNING
D COMPENSATORY EDUCATION
R ACTION PROGRAMS
R TRADE SCHOOLS
R CAREER DEVELOPMENT

R CEC
R ECONOMIC OPPORTUNITY
R MODEL CITIES PROGRAM
R COMMUNITY PLANNING
R COMMUNITY COUNCILS

B *POWER
D SOLAR ENERGY
D FUEL
D GAS
D NUCLEAR ENERGY
D ELECTRICITY
C NETWORKS
M ELECTRIC
M LOCAL
INCLUDES THE DISTRIBUTION SYSTEMS

B *POWER/LOCAL
USE *POWER
U INFRASTRUCTURE
FULL SUBSTITUTION POWER/LOCAL

B *PPBS
F PLANNING PROGRAMMING BUDGETING SYSTEM
U MANAGEMENT SCIENCE
R FISCAL PLANNING, POLICY

S PRE-SCHOOL
S COMPENSATORY EDUCATION
S EDUCATION

B *PREFABRICATION
U BUILDING TECHNOLOGY
INCLUDES PREFABRICATED ELEMENTS FOR THE INTERIOR PORTIONS OF A STRUCTURE, SUCH AS UTILITY CORES.

S PRELIMINARY

S PRESERVATION
S LANDMARKS
S HISTORIC SITES

B *PRESS RELEASES
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *PRICE INDEXES
USE *INDICATORS

S PRICES
USE COSTS

S PRIMARY
USE ELEMENTARY

B *PRINTING, PUBLISHING
U MANUFACTURING
U COMMUNICATIONS

S PRIORITIES

S PRIVATE
S SCHOOLS
R NON-ASSISTED
P FINANCIAL SOURCES

B *PRIVATE CLUBS

B *PRIVATE SECTOR
F FREE ENTERPRISE
U ECONOMICS
D PROFIT
D INVESTMENTS
D PUBLIC SECTOR
C FINANCIAL SOURCES
R SPONSORS

B *PROBABILITY
U MATHEMATICAL ANALYSIS

B *PROCEDURES
D APPEALS
D APPLICATIONS
D CERTIFICATION
D CLAIMS

```
        MAY BE USED FOR ANY DISCUSSION OF ADMINISTRATIVE STE
B   *PROCEEDINGS
        U   FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B   *PRODUCTIVITY
        U   LABOR
B   *PROFESSIONS
        D   GEOGRAPHERS
        D   INFORMATION SCIENTISTS
        D   PLANNERS
        D   SOCIAL WORKERS
B   *PROFIT
        U   PRIVATE SECTOR
B   *PROGRAM STANDARDS
        R   MODEL CITIES PROGRAM
B   *PROGRAMMED LEARNING
        R   TEACHING MACHINES
        R   TRAINING PROGRAMS
B   *PROGRAMMING
        F   WORK PROGRAMMING
        D   CPM
        R   PERT
        C   PROJECT PLANNING
        R   RESEARCH DESIGN
        R   RESEARCH AND DEVELOPMENT
        R   MANAGEMENT SCIENCE
        R   SYSTEMS ANALYSIS
        INCLUDES WORK PROGRAMMING AND SCHEDULING. DO NOT USE
        FOR COMPUTER PROGRAMMING, WHICH IS INCLUDED IN
        SYSTEMS ANALYSIS
B   *PROJECT COSTS
        N   GROSS
        N   NET
B   *PROJECT PLANNING
        U   RENEWAL
        C   PROGRAMMING
        R   RENEWAL AREAS
        INCLUDES THE NECESSARY ADMINISTRATIVE PROCEDURES
B   *PROJECTING
     USE   *FORECASTING
S   PROJECTIONS
     USE   FORECASTS
B   *PROJECTS
     USE   *DEVELOPMENTS
        NOT TO BE CONFUSED WITH RESEARCH PROJECTS
B   *PROPERTY IMPROVEMENT
        F   HOME IMPROVEMENT
        U   BUILDING CONDITIONS
        D   RENOVATION
        R   PROPERTY MANAGEMENT
        R   CONSERVATION
        R   REFINANCING
        R   REHABILITATION
B   *PROPERTY MANAGEMENT
        F   BUILDING MAINTENANCE
        F   REPAIRS
        U   REAL ESTATE BUSINESS
        U   DEVELOPMENT MANAGEMENT
        R   PROPERTY IMPROVEMENT
        R   REHABILITATION
        R   VANDALISM
        R   TENANT ASSOCIATIONS
        R   SLUM OWNERSHIP
        INCLUDES THOSE ACTIVITIES ORDINARILY IN THE
        JURISDICTION OF THE BUILDING SUPERINTENDENT
B   *PROPERTY PROTECTION
        D   REINSURANCE
```

D FIRE INSURANCE
R RIOTS
R PROPERTY VALUES
URBAN PROPERTY PROTECTION AND REINSURANCE ACT OF 1968. U.S.

B *PROPERTY VALUES
R HOUSING ECONOMICS
R LAND VALUES
R PROPERTY PROTECTION

B *PROTEST ACTION
D TENANT ASSOCIATIONS
D RIOTS
R POLITICS
R PUBLIC OPINION

S PSYCHOLOGICAL
S IMPACT

B *PSYCHOLOGY
U BEHAVIORAL SCIENCES
U MAN
R MENTAL HEALTH

S PUBLIC
CONSIDER MODIFYING ART, NOT NEEDED TO MODIFY HEALTH, LIBRARIES, SCHOOLS AS THIS IS IMPLIED

B *PUBLIC ADMINISTRATION
F GOVERNMENT
U POLITICAL SCIENCE
D SUB-NATIONAL GOVERNMENT
D INTERGOVERNMENTAL RELATIONS
D AUTHORITIES
D PUBLIC EMPLOYEES
D QUASI-GOVERNMENTAL
D PLANNING ADMINISTRATION
P STATE
P COUNTY
P URBAN
P LOCAL
P METROPOLITAN
R FEDERAL GOVERNMENT

B *PUBLIC ASSEMBLY
USE *ASSEMBLY PLACES

B *PUBLIC ASSISTANCE
USE *SOCIAL WELFARE

B *PUBLIC AUTHORITIES
USE *AUTHORITIES

B *PUBLIC BUILDINGS
D ASSEMBLY PLACES
D COMMUNITY FACILITIES
D GOVERNMENTAL SERVICES
D RECREATIONAL FACILITIES

B *PUBLIC EMPLOYEES
U PUBLIC ADMINISTRATION

B *PUBLIC FACILITIES
F PUBLIC WORKS
U URBAN DEVELOPMENT
D PUBLIC IMPROVEMENTS
D SCHOOLS
D SEWERAGE
D WATER SYSTEMS
C SERVICE AREAS
REFERS SPECIFICALLY TO THE PARTICULAR PROGRAM OF HUD

B *PUBLIC FINANCE
U POLITICAL SCIENCE
D MUNICIPAL FINANCE
D PUBLIC SECTOR
D REVENUES
D METROPOLITAN AREA FINANCE

B *PUBLIC HEALTH

B *PUBLIC HOUSING
F HOUSING ESTATES
F ESTATE HOUSING
U HOUSING ASSIST
R HOUSING AUTHORITIES
R SCATTERED SITE HOUSING
R LEASED HOUSING
R TURNKEY
REFERS TO HOUSING WHICH IS BUILT AND MANAGED BY GOVERNMENT

B *PUBLIC HOUSING ADMINISTRATION
USE *PHA

B *PUBLIC HOUSING AUTHORITIES
USE *HOUSING AUTHORITIES

B *PUBLIC IMPROVEMENTS
U LOCAL CONTRIBUTION
U PUBLIC FACILITIES
D SEWERAGE
D SIDEWALKS
D STREET LIGHTING
D STREET WIDENING
D STREET FURNITURE
R COMMUNITY FACILITIES
R SUBDIVISIONS

B *PUBLIC INTEREST GROUPS
REFERS ONLY TO NATIONAL GROUPS OR THEIR SUB-NATIONAL AFFILIATES

B *PUBLIC LAND
F FEDERAL ENCLAVES
U LAND RESOURCES
D HOMESTEAD
LANDS BELONGING TO THE FEDERAL GOVERNMENT THAT HAVE NOT BEEN RESERVED FOR ANY SPECIAL OR GOVERNMENTAL PURPOSES

B *PUBLIC OFFICIALS
F FEDERAL OFFICIALS
F MUNICIPAL OFFICIALS
F STATE OFFICIALS
F ELECTED OFFICIALS
M FEDERAL
M MUNICIPAL
M STATE
R OMBUDSMAN
R TRAINING PROGRAMS

B *PUBLIC OPINION
R PROTEST ACTION

B *PUBLIC RELATIONS

B *PUBLIC SAFETY
U GOVERNMENTAL SERVICES
D CIVIL DEFENSE
D FIRE FACILITIES
D POLICE FACILITIES
D DISASTER SERVICES
D EMERGENCY SERVICES
R LAW ENFORCEMENT

B *PUBLIC SECTOR
U ECONOMICS
U PUBLIC FINANCE
D PRIVATE SECTOR
C FINANCIAL SOURCES
R SOCIAL ACCOUNTS
REFERS TO THE ECONOMIC FUNCTIONS OF PUBLIC EXPENDITURES.

B *PUBLIC UTILITIES
USE *UTILITIES

B *PUBLIC UTILITY PLANS
USE *UTILITIES PLANS

B *PUBLIC WELFARE
F WELFARE
F COMMUNITY WELFARE
U SOCIAL PLANNING
R SOCIAL SERVICES
R NEIGHBORHOOD SERVICE CENTER
R FAMILY INCOME
USED FOR FEDERAL AND OR STATE WELFARE ASSISTANCE PROGRAMS SUCH AS AID TO DEPENDENT CHILDREN
B *PUBLIC WORKS
USE *PUBLIC FACILITIES
B *PUBLIC-PRIVATE SECTOR
S PUBLICATION
FOR SYSTEMS USE.
B *PUBLICATIONS LISTS
U FORMATS (CONTB)
R ACQUISITIONS LISTS
REFERENCE TCOL. LIST ISSUED BY A PARTICULAR AGENCY OR POLITICAL JURISDICTION OF ITS OWN PUBLICATIONS
B *PUERTO RICANS
U MINORITY GROUPS
B *PUNCHED CARD SYSTEMS
U DATA PROCESSING
R COMPUTERS
B *PUPIL TRANSPORT
F BUSING
U CIRCULATION
R INTEGRATION
R SCHOOL DISTRICTS
B *PURCHASE
U LAND ACQUISITION
B *QUALITY CONTROL
B *QUARRYING
U RESOURCE PRODUCTION
U MINING AND EXTRACT IND
B *QUASI-GOVERNMENTAL
U PUBLIC ADMINISTRATION
D MUNICIPAL LEAGUES
D ACTION PROGRAMS
D CITIZEN PARTICIPATION
D COMMUNITY ORGANIZATIONS
D REGIONAL COUNCILS
B *QUESTIONNAIRES
B *RAA
F RENEWAL ASSISTANCE ADMINISTRATION
U HUD
B *RACE RELATIONS
U SOCIOLOGY
B *RACE TRACKS
U ASSEMBLY PLACES
S RACIAL
S URBAN FORM
B *RADIO, TELEVISION
U COMMUNICATIONS
U ENTERTAINMENT
B *RADIOACTIVITY
U ENVIRONMENTAL PROTECTION
B *RAIL TRANSPORT
U TRANSPORT SYSTEMS
D RAILROADS
R RAPID TRANSIT
R HSGT
B *RAILROADS
F TRAINS
U RAIL TRANSPORT
U VEHICLES
U TRANSPORT SYSTEMS

```
        R  TRANSPORT EQUIPMENT
B  *RAPID TRANSIT
        F  TRANSIT
        U  CIRCULATION
        U  CIRCULATION ELEMENTS
        U  TRANSPORTATION
        D  BUSES
        D  SUBWAYS
        R  RAIL TRANSPORT
        R  HSGT
        C  ZONES
        R  TRANSPORT EQUIPMENT
        PRIMARILY RAIL
B  *RATES
     USE  *CHARGES
S    RATIO
B  *REAL ESTATE BUSINESS
        U  BUSINESS
        U  DEVELOPERS
        U  LAND ECONOMICS
        D  PROPERTY MANAGEMENT
        R  DEVELOPMENT MANAGEMENT
        R  MARKETING
        INCLUDES REALTORS
B  *REAL PROPERTY LAW
        F  LAND TITLES
        F  TAX DELINQUENT
        F  LIENS
        F  FEE SIMPLE
        F  FREEHOLD
        U  LAW, LAWS
        D  EASEMENTS
        D  TENURE
        D  LAND OWNERSHIP
B  *REAL PROPERTY TAXES
        U  MUNICIPAL FINANCE
        U  TAXATION
        R  DEAD LAND
        R  LAND TAX
B  *REAPPORTIONMENT
        U  POLITICS
        R  LEGISLATIVE BODIES
        R  VOTING
B  *RECEIVERSHIP
        U  CODE ENFORCEMENT
B  *RECLAMATION
        U  LAND DEVELOPMENT
        D  LAND FILL
        R  WETLANDS
        R  MINING AND EXTRACT IND
B  *RECORDS
        U  FORMATS
        DOES NOT REFER TO PHONOGRAPH RECORDS. ENTER UNDER
        FORMAT ANALYSIS WHERE APPLICABLE.
B  *RECORDS MANAGEMENT
        U  MANAGEMENT SCIENCE
B  *RECREATION
        D  OUTDOOR RECREATION
        D  RECREATIONAL FACILITIES
        D  SPORTS ACTIVITIES
        D  RECREATION AREAS
        D  RECREATION PROGRAMS
        M  COMMERCIAL
B  *RECREATION AREAS
        U  RECREATION
        R  OUTDOOR RECREATION
        R  RECREATIONAL FACILITIES
```

R ECOLOGICAL STUDIES
USE AS LAND-USE TERM.
B *RECREATION PLANS
U COMPREHENSIVE PLANS
R OPEN SPACE PLANS
B *RECREATION PROGRAMS
U RECREATION
R RECREATIONAL FACILITIES
R SPORTS ACTIVITIES
C MODEL CITIES PROGRAM
B *RECREATIONAL FACILITIES
U COMMUNITY FACILITIES
U PUBLIC BUILDINGS
D MARINAS
D BEACHES
D PLAY AREAS
D PLAY FIELDS
D POOLS
C LOCATION
M ADMINISTRATION
M DESIGN
M STANDARDS
R OUTDOOR RECREATION
M COMMERCIAL
R RECREATION AREAS
R RECREATION PROGRAMS
R USER STUDIES
B *RECREATIONAL TRIPS
U TRIPS
R OUTDOOR RECREATION
R PARKWAYS
B *RECRUITMENT
B *REDEVELOPED LAND
B *REDEVELOPER
USE *DEVELOPERS
B *REDEVELOPMENT
USE *RENEWAL
B *REDEVELOPMENT AUTHORITY
USE *LOCAL PUBLIC AGENCY
B *REDEVELOPMENT CORP
U SPONSORS
B *REFERENDUM
U POLITICS
R VOTING
B *REFINANCING
U FINANCING
R MORTGAGES
B *REFORMS
B *REFRIGERATION
USE *FURNITURE, EQUIPMENT
B *REFUSE DISPOSAL
U WASTE MANAGEMENT
R SOLID WASTE DISPOSAL
S REGIONAL
F INTERREGIONAL
S INTERGOVERNMENTAL RELATIONS
S AGENCIES
S CENTRES
REFERS TO AREAS LARGER THAN CITIES BUT SMALLER THAN THE NATION. THE UNIFYING FACTOR MAY BE ECONOMIC, GEOGRAPHIC, POLITICAL, RIVER BASIN, OR TRANSPORTATION
B *REGIONAL ACCOUNTS
F ACCOUNTS
U REGIONAL SCIENCE
THE ECONOMIC AND SOCIAL ANALYSIS OF AN AREA, BASED UPON INPUT-OUTPUT ACCOUNTING. THE SIZE OF THE AREA RANGING BETWEEN, BUT NOT INCLUDING, THE CITY AND

THE NATION
B *REGIONAL COUNCILS
U QUASI-GOVERNMENTAL
R REGIONAL PLANNING
R SPECIAL DISTRICTS
R COUNCILS OF GOVERNMENT
ADVISORY BODIES GENERALLY FORMED TO STIMULATE AND COORDINATE VARIOUS TYPES OF PLANNING ACTIVITIES WITHIN THE REGION.
B *REGIONAL ECONOMICS
U REGIONAL SCIENCE
U ECONOMICS
B *REGIONAL GOVERNMENT
B *REGIONAL PLANNING
U REGIONAL SCIENCE
D RURAL PLANNING
R PLANNING UNIT
R REGIONAL COUNCILS
R URBAN PLANNING
R METROPOLITAN AREA PLAN
PLANNING FOR AN AREA LARGER THAN CITIES, INCLUDING METROPOLITAN AREAS, RIVER BASINS, PORTIONS OF STATES. TENDS TOWARD ECONOMIC AND RESOURCE CONSIDERATIONS
B *REGIONAL SCIENCE
F AREAL ANALYSIS
D REGIONAL ACCOUNTS
D REGIONAL PLANNING
D REGIONAL ECONOMICS
R SPATIAL ANALYSIS
S REGIONAL-LOCAL
M INTERGOVERNMENTAL RELATIONS
B *REGIONS
D METROPOLITAN AREAS
D RIVER BASINS
D SCA
D SMSA
D MEGALOPOLIS
B *REGULATIONS
USE *ADMINISTRATIVE LAW
FOR ADMINISTRATIVE REGULATIONS, SUBSTITUTE *ADMINISTRATIVE LAW. FOR GENERAL DISCUSSIONS THAT ALSO INCLUDE LEGISLATION, SUBSTITUTE *LAW, LAWS
S REGULATORY
S AGENCIES
B *REHABILITATION
U RENEWAL
C BUILDING TECHNOLOGY
R CONSERVATION
R PROPERTY IMPROVEMENT
R PROPERTY MANAGEMENT
R REHABILITATION STANDARDS
WHEN COORDINATED WITH BUILDING TECHNOLOGY, INCLUDES THE MEANING OF INSTANT HOUSING AND INSTANT REHAB
B *REHABILITATION AREAS
F CONSERVATION AREAS
U RENEWAL AREAS
R PROPERTY IMPROVEMENT
B *REHABILITATION ASSIST
C GRANTS
C LOANS
C FEDERAL POLICY
UMBRELLA TERM FOR SEC.115, GRANTS, AND SEC.312, LOANS, OF THE HOUSING ACT
B *REHABILITATION STANDARDS
R REHABILITATION
R CODE ENFORCEMENT

```
B  *REINSURANCE
        U  PROPERTY PROTECTION
        R  RIOTS
S   RELATED
        S  AGENCIES
        S  PROFESSIONS
B  *RELIGIOUS ACTIVITIES
        U  ASSEMBLY PLACES
        U  LAND USE
        D  CHURCHES, SYNAGOGUES
B  *RELOCATION
        U  RENEWAL
        U  SOCIAL PLANNING
        M  COMMERCIAL
        M  INDUSTRIAL
        M  RESIDENTIAL
        M  STANDARDS
        C  SOCIAL SERVICES
        R  WORKABLE PROGRAM
        R  RELOCATION STANDARDS
        REQUIRED ELEMENT OF THE WORKABLE PROGRAM REPORT
B  *RELOCATION STANDARDS
        R  RELOCATION
B  *REMODELING
     USE  *RENOVATION
B  *REMOTE SENSORS
B  *RENEWAL
        F  REDEVELOPMENT
        D  CONSERVATION
        D  PROJECT PLANNING
        D  REHABILITATION
        D  RELOCATION
        D  RENEWAL AREAS
        D  URP
        D  TITLE I
B  *RENEWAL (CONT)
        R  DEVELOPMENTS
        R  HOUSING
        R  LPA
        R  REVITALIZATION
        R  URBAN DEVELOPMENT
        P  PUBLICLY ASSISTED
        M  NON-ASSISTED
        M  STANDARDS
        R  WRITE-DOWN
        R  CLEARANCE
        WHEN STANDARDS ARE PROVIDED, APPLY TO RENEWAL INSTEAD
        OF RENEWAL AREAS.
B  *RENEWAL AREAS
        U  RENEWAL
        D  REHABILITATION AREAS
        R  DEVELOPMENTS
        R  PROJECT PLANNING
        R  NEW COMMUNITIES
        R  TEMPORARY HOUSING
        R  NEIGHBORHOOD DEVEL PROG
        WILL ALWAYS BE ACCOMPANIED BY A GEOGRAPHIC DESCRIPTOR
B  *RENEWAL ASSIST
        M  FEDERAL
        C  FEDERAL POLICY
        C  DRAA.LP
        WHEN TERM IS MODIFIED BY FEDERAL, COORDINATE WITH
        DRAA.LP
B  *RENEWAL ASSISTANCE ADMINISTRATION
     USE  *RAA
B  *RENEWAL EXECUTION
        R  RENEWAL FUNDS
```

```
        USE ONLY FOR DOCUMENTS REQUIRED BY HUD FROM THE LPA TO
        REPORT THE EXECUTION OF THE RENEWAL PROGRAMS
B   *RENEWAL FUNDS
        C   ACCOUNTING
        R   RENEWAL EXECUTION
        ADVANCE TEMPORARY LOANS AND LOAN AND GRANT CONTRACTS
B   *RENEWAL PLANNING
        D   ACQUISTION APPRAISALS
        D   CAPITAL GRANT APPLIC
        D   CRP APPLIC
        D   GNRP APPLIC
        D   LAND USE, MARKET SURVEY
        D   LOAN, GRANT APPLIC
        D   REUSE APPRAISALS
        D   SPECIAL APPRAISALS
        D   SURVEY, PLANNING APPLIC
        D   WORKABLE PROGRAM APPLIC
        USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE
        LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B   *RENOVATION
        F   REMODELING
        F   MODERNIZATION
        U   PROPERTY IMPROVEMENT
B   *RENT CONTROL
        U   RENTS
B   *RENT SUPPLEMENTS
        U   RENTS
        U   SUBSIDIES
B   *RENTAL HOUSING
        U   HOUSING ECONOMICS
        U   HOUSING STOCK
        R   TENANT-OCCUPANCY
B   *RENTS
        U   CHARGES
        U   HOUSING ECONOMICS
        D   RENT CONTROL
        D   RENT SUPPLEMENTS
B   *REORGANIZATION
B   *REPAIRS
     USE  *PROPERTY MANAGEMENT
B   *REPORTING
        R   ACCOUNTING
        REQUIREMENTS, DESIGN, CONTENT, ETC. OF REPORT WRITING
B   *REQUIREMENTS
        M   FEDERAL
        M   STATE
B   *RESEARCH
        C   BUILDING TECHNOLOGY
        C   HIGHWAYS
        C   HOUSING
        C   URBAN AFFAIRS
        C   URBAN PLANNING
        INDICATES THE SCOPE AND NATURE OF RESEARCH ACTIVITY.
B   *RESEARCH AND DEVELOPMENT
        U   INDUSTRIAL AREAS
        U   INDUSTRY
        C   BUILDING TECHNOLOGY
        C   INFORMATION SYSTEMS
        C   SCIENCE
        O   RESEARCH DESIGN
        REFERS TO A BRANCH OF INDUSTRIAL ACTIVITY.  TO BE
        USED IN A COORDINATE RELATIONSHIP, REFERS
        SPECIFICALLY TO RESEARCH ON TECHNICAL ASPECTS
B   *RESEARCH DESIGN
        U   SYSTEMS ANALYSIS
        O   RESEARCH AND DEVELOPMENT
        R   PROGRAMMING
```

SYSTEMS APPROACH TO PROGRAMMING ANY PLANNING ENDEAVOR.
USE ONLY IF AN IMPORTANT FACTOR OR DOCUMENT

B *RESEARCH PROJECTS
P DEMONSTRATION REPORTS
P UPAP REPORT
USE ONLY FOR SPECIALLY FUNDED RESEARCH ACTIVITIES, NOT FOR THOSE THAT WOULD NORMALLY BE CARRIED ON AS PART OF AN AGENCY'S RESPONSIBILITIES, SUCH AS CRP REPORTS

B *RESERVOIRS
U WATER SYSTEMS
U WATERFRONTS

S RESIDENTIAL
P LAND USE
S BUILDINGS
S DEVELOPMENTS
S RELOCATION

B *RESIDENTIAL AREAS
U LAND USE
D SERVICE STATIONS
R LAND VALUES
R NEW COMMUNITIES

B *RESIDENTIAL COLLECTION
F PARK AND RIDE
U MASS TRANSPORTATION

B *RESIDENTIAL LOCATION
R HOME OWNERSHIP

B *RESORTS
U LAND USE
U LEISURE
R AMUSEMENT AREAS
C HOTELS, MOTELS
R SPORTS ACTIVITIES
C SEASONAL HOUSING
R TOURISM
INCLUDES RESORT CITIES. AREAS AS WELL AS FACILITIES

B *RESOURCE PRODUCTION
C AGRICULTURAL ACTIVITIES
D AGRICULTURE
D FISHING INDUSTRY
D FORESTS, FORESTRY
D PETROLEUM INDUSTRY
D QUARRYING
D MINING AND EXTRACT IND
R GEOLOGICAL RESOURCES
R NATURAL RESOURCES
R DEPLETED AREAS

B *RESOURCES
D TAX REVENUE
D MANPOWER
D NATURAL RESOURCES
M ALLOCATION

B *RESPONSIBILITY

B *RESTAURANTS
USE *EATING, DRINKING PLACES

B *RESTORATION
U CONSERVATION
C ARCHITECTURE
C HISTORIC SITES

B *RESTRICTIVE COVENANTS
USE *COVENANTS

B *RETAIL SALES
U ECONOMIC BASE STUDIES
R RETAIL TRADE
R CBD

B *RETAIL TRADE
U BUSINESS
D DEPARTMENT STORES

D VENDING MACHINES
D DISCOUNT STORES
R RETAIL SALES
R STORES

B *RETAIL, CONSUMER SERVICES
USE *SERVICE TRADES

B *RETIREMENT HOMES
U GROUP QUARTERS
U ELDERLY
U HOUSING THE ELDERLY
R NURSING HOMES
1965 STANDARD LAND USE CODING MANUAL

B *REUSE
R LAND VALUES
C APPRAISAL

B *REUSE APPRAISALS
U RENEWAL PLANNING
R APPRAISAL
USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE.

B *REVENUE SHARING
R TAX SHARING
R INTERGOVERNMENTAL RELATIONS

B *REVENUES
U PUBLIC FINANCE
D BONDS
D CHARGES
D TAX REVENUES
SOURCES OF GOVERNMENT FUNDS THAT DERIVE FROM NORMAL OPERATIONS AND SERVICES

B *REVERSE COMMUTING
U COMMUTING
R TRAFFIC
R TRIPS

B *REVIEWS
U FORMATS
INCLUDES REVIEWS OF BOOKS AND PLANS. ENTER UNDER FORMATS WHERE APPLICABLE.

B *REVITALIZATION
U URBAN DEVELOPMENT
R RENEWAL
C CENTRAL CITY
C CBD
R BUSINESS IMPROVEMENT
REFERS TO THE REVITALIZATION OF AN AREA IN TERMS OF ITS ECONOMIC, CULTURAL OR SOCIAL LIFE

B *RIBBONS
USE *STRIPS

B *RIGHT-OF-WAY
U CIRCULATION ELEMENTS
R ROADSIDES

S RIGHTS
S LANDLORD AND TENANT
S MINORITY GROUPS
S RIPARIAN

B *RINGS
U URBAN FORM/CIRCULAR
R CORRIDORS
R FRINGE AREAS

B *RIOTS
U PROTEST ACTION
R PROPERTY PROTECTION
R REINSURANCE

B *RIPARIAN
U WATERFRONTS
R RIGHTS

B *RIVER BASINS

U REGIONS
U WATER RESOURCES
R WATERSHEDS
R WATERWAYS

B *RIVERS
U WATERWAYS
INCLUDES THE RIVERBANKS

B *ROADS
USE *HIGHWAYS

B *ROADSIDES
F HIGHWAY BEAUTIFICATION
U CIRCULATION ELEMENTS
U HIGHWAYS
M CONTROLS
R RIGHT-OF-WAY
R TRAVELLER SERVICES
R BEAUTIFICATION
R SIGNS, BILLBOARDS
R JUNK YARDS
R COMMERCIAL STRIPS
RELATED TO HIGHWAYS AND EXPRESSWAYS. INCLUDES BEAUTIFICATION PROGRAMS

B *RODENTS
USE *PESTS

B *ROOFS, ROOFING
U ARCHITECTURAL FEATURES
U BUILDING TECHNOLOGY
U BUILDINGS

B *ROOMS
U HOUSES
U MULTIPLE DWELLINGS
U BUILDINGS
D BATHROOMS
D BEDROOMS
D KITCHENS
INVOLVES CONSIDERATIONS OF SIZE, LAY-OUT, AND SPECIAL EQUIPMENT

B *ROOMS, ROOMING HOUSES
F BOARDING HOUSES
F FOSTER HOMES
U MULTIPLE DWELLINGS
U TRANSIENT HOUSING

B *ROW HOUSES
U ATTACHED HOUSES
R TOWNHOUSES
R PATIO HOUSES

S RURAL
S CITIES, TOWNS

B *RURAL AREAS

B *RURAL HOUSING
R SELF HELP HOUSING

B *RURAL PLANNING
U COUNTY PLANNING
U REGIONAL PLANNING

B *SAFETY
F ACCIDENTS
F HAZARDS

B *SALARIES
U INCOME
R WAGES

B *SALE-LEASEBACK
U TENURE
1964 APPRAISAL JOURNAL VOL.32

B *SALES
U INDICATORS
C BUILDINGS
C HOUSES

```
        C  HOUSING ECONOMICS
        C  LAND ECONOMICS
        C  WHOLESALE TRADE
        P  HOUSING
        C  BUSINESS
        TO BE USED AS AN ECONOMIC INDICATOR IN COORDINATE
        RELATIONSHIPS
B  *SALES TAX
        U  TAXATION
B  *SALVAGE
        U  INDUSTRIAL AREAS
        U  INDUSTRY
        U  WASTE MANAGEMENT
        R  DEMOLITION
B  *SAMPLING
        U  METHODOLOGY
B  *SANITATION
        U  WASTE MANAGEMENT
        R  REFUSE DISPOSAL
        STREET CLEANING AND SIMILAR ACTIVIES
B  *SATELLITES
        U  DEVELOPMENTS/MULTI-PURPOSE
        R  GARDEN CITIES
        C  CITIES, TOWNS
        C  INDUSTRY
        R  SUBURBS
        R  CENTRES
B  *SAVINGS
        U  INVESTMENTS
B  *SAVINGS BANKS
        R  BANKS, BANKING
        R  MORTGAGE FINANCING
        R  BUILDING AND LOAN ASSOCIATIONS
B  *SCA
        F  STANDARD CONSOLIDATED AREAS
        U  REGIONS
B  *SCALE
        F  HUMAN SCALE
        F  LOW-RISE
        F  HIGH-RISE
        U  DESIGN
        M  LARGE
        M  SMALL
        R  FAMILY SIZE
        R  PLANNING UNIT
        R  BULK, HEIGHT
        R  CITY SIZE
        USED FOR DISCUSSIONS WHERE RELATIVE SIZE IS A PRIME
        CONSIDERATION
B  *SCALE MODELS
B  *SCATTERED SITE HOUSING
        R  LOCATION
        R  PUBLIC HOUSING
        R  VESTPOCKET HOUSING
B  *SCHOLARSHIPS
    USE  *FELLOWSHIPS, SCHOLARSHI
B  *SCHOOL DISTRICTS
        U  SPECIAL DISTRICTS
        R  PUPIL TRANSPORT
        R  EDUCATIONAL PARKS
        R  SCHOOLS/LOCATION
        R  SCHOOL SYSTEMS
B  *SCHOOL ENROLLMENT
        R  SCHOOLS
        R  SCHOOL SYSTEMS
B  *SCHOOL LIBRARIES
        U  LIBRARIES
```

B *SCHOOL SYSTEMS
R EDUCATIONAL FACILITIES
R SCHOOL DISTRICTS
R SCHOOL ENROLLMENT
INCLUDES SCHOOL BOARDS AND CONCERNS OF ADMINISTRATION AND ORGANIZATION
B *SCHOOLING
USE *EDUCATIONAL ATTAINMENT
B *SCHOOLS
U EDUCATIONAL FACILITIES
U COMMUNITY FACILITIES
U PUBLIC FACILITIES
N ELEMENTARY
N SECONDARY
R EDUCATION
C LOCATION
N DESIGN
P ADMINISTRATION
P FINANCING
R SCHOOL ENROLLMENT
USE FOR DISCUSSIONS THAT PRIMARILY INVOLVE THE PHYSICAL PLANT, ITS DESIGN AND LOCATION. USE SCHOOL SYSTEMS FOR QUESTIONS OF ADMINISTRATION, DECENTRALIZATION, ETC.
B *SCHOOLS/SECONDARY
USE *SCHOOLS
F HIGH SCHOOLS
F SECONDARY SCHOOLS
N JUNIOR
FULL SUBSTITUTION SCHOOLS/SECONDARY
B *SCIENCE
C RESEARCH AND DEVELOPMENT
B *SCULPTURE
U ART
S SEASONAL
S EMPLOYMENT
S INDUSTRY
B *SEASONAL HOUSING
F VACATION HOUSES
R LEISURE
C RESORTS
S SECONDARY
S EDUCATION
S SCHOOLS
B *SECONDARY SCHOOLS
USE *SCHOOLS
FULL SUBSTITUTION SCHOOLS/SECONDARY
B *SECURITIES
U INVESTMENTS
B -SEE REFERENCES
U FORMATS
USED UNDER FORMAT ANALYSIS AS A UTILITY RECORD FOR ACRONYMS, SEE, SEE ALSO, AND USED FOR, REFERENCES. FOR PUBLICATIONS PROGRAM.
B *SEED MONEY
U FINANCIAL ASSISTANCE
B *SEGREGATION
USE *INTEGRATION
S SELF-HELP
S HOUSING
B *SELF-HELP HOUSING
R RURAL HOUSING
B *SEMI-DETACHED HOUSES
USE *ATTACHED HOUSES
B *SEPTIC TANKS
U SEWERAGE
B *SERIAL ENTRIES

```
        U  FORMATS (CONTB)
B  *SERIAL TITLES
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B  *SERVICE AREAS
        U  URBAN PLANNING
        R  COMMUNITY FACILITIES
        R  COMMUNITY PLANNING
        R  PLANNING UNIT
        R  METROPOLITAN AREA PLAN
        REFERS TO THE JURISDICTION COVERED BY FACILITIES
        OR SERVICES
B  *SERVICE CHARGES
     USE  *CHARGES
B  *SERVICE INDUSTRIES
     USE  *SERVICE TRADES
B  *SERVICE STATIONS
        U  ACCESSORY USES
        U  RESIDENTIAL AREAS
        U  TRAVELLER SERVICES
B  *SERVICE TRADES
        F  RETAIL, CONSUMER SERVICES
        F  SERVICE INDUSTRIES
        U  BUSINESS
B  *SET-BACK
        U   ZONING REQUIREMENTS
        U  SITE PLANNING
        R   OPEN SPACE RATIO
        1966      URBAN LAND.  A PRELIMINARY GLOSSARY
B  *SEWERAGE
        U  INFRASTRUCTURE
        U  PUBLIC FACILITIES
        U  PUBLIC IMPROVEMENTS
        D  SEPTIC TANKS
        C  NETWORKS
        R  WASTE MANAGEMENT
        INCLUDES SEWAGE DISPOSAL, SEWERAGE SYSTEMS
B  *SEWING CENTRE
     USE  *COMMUNITY ROOMS
        1951      U.N. HOUSING + TOWN + COUNTRY PLANNING
        BULLETIN 5
B  *SEX
        F  FEMALE
        F  MALE
        U  POPULATION CHARACTERISTICS
B  *SHIP-BUILDING
        U  INDUSTRY
B  *SHIPPING
     USE  *FREIGHT
        REFERS TO THE PROCESS NOT THE CARRIER
B  *SHIPS
        F  MERCHANT MARINE
        U  TRANSPORT SYSTEMS
        U  VEHICLES
        R  MARINE TRANSPORT
B  *SHOPPING CENTERS
        U  DEVELOPMENTS/COMMERCIAL
        U  COMMERCIAL AREAS
        D  SUPERMARKETS
B  *SHORE LINE
     USE  *WATERFRONTS
S    SHORT-DISTANCE
        O  LONG-DISTANCE
S    SHORT//LONG-RANGE
        F  LONG-RANGE
B  *SIDEWALKS
        F  CURBS
```

U PUBLIC IMPROVEMENTS
D MOVING PLATFORMS

B *SIGNS, BILLBOARDS
F ADVERTISING
R OVERHANG
R ROADSIDES

B *SIMULATIONS
U MANAGEMENT SCIENCE
C COMPUTERS
C MATHEMATICAL ANALYSIS
R GAMING, GAME THEORY
R MODELS
C DATA PROCESSING
THE REPRESENTATION OF A FUNCTIONING SYSTEM BY ANOTHER, SUCH AS A COMPUTER PROGRAM OR A MATHEMATICAL MODEL. IF COMPUTERS ARE INVOLVED, ADD TERM *DATA PROCESSING

S SINGLE-FAMILY
D MULTI-FAMILY
S HOUSING STOCK

B *SINGLE-ROOM OCCUPANCY
U HOUSING STOCK

B *SITE PLANNING
F LAYOUT
U PHYSICAL PLANNING
D SET-BACK
D DRAINAGE
R PROJECT PLANNING
R DEVELOPMENTS
R LANDSCAPE ARCHITECTURE
R ARCHITECTURAL DESIGN
R PATHS
C PEDESTRIANWAYS
R OPEN SPACE RATIO
ARRANGEMENT OF STRUCTURES ON THE LAND

B *SITE SELECTION
USE *LOCATION

B *SIZE
USE *SCALE

B *SKETCH PLANS
U COMPREHENSIVE PLANNING
R ALTERNATIVES
R MASTER PLANS

B *SKID-ROW
U COMMERCIAL AREAS
R SOCIAL RENEWAL

S SKILLED-UNSKILLED
R EMPLOYMENT
R MANPOWER
R LABOR FORCE

B *SKYSCRAPERS
M RESIDENTIAL
M COMMERCIAL
R SCALE

B *SLIDES
USE *FILMS

B *SLOPES
F HILLSIDES
U TOPOGRAPHICAL FEATURES

B *SLUM OWNERSHIP
F SLUMLORDS
U HOUSING ECONOMICS
R LANDLORD AND TENANT
R PROPERTY MANAGEMENT

B *SLUMLORDS
USE *SLUM OWNERSHIP

B *SLUMS
R BLIGHT

```
        R  DEPRESSED AREAS
        R  GHETTOS
        R  TENEMENTS
        R  FIRE INSURANCE
S   SMALL
        O  LARGE
        S  SCALE
        S  FAMILY SIZE
B  *SMALL BUSINESS
        U  BUSINESS
        R  BUSINESS CONCERNS
        R  MANUFACTURING
B  *SMALLER CITIES
        U  CITIES, TOWNS
B  *SMOG
        U  AIR POLLUTION
B  *SMOKE
        U  AIR POLLUTION
B  *SMSA
        F  STANDARD METROPOLITAN STATISTICAL AREA
        U  REGIONS
        C  METROPOLITAN AREA PLAN
S   SOCIAL
        S  ACTIVITY
        S  IMPACT
B  *SOCIAL ACCOUNTS
        R  PUBLIC SECTOR
        1965      PITTSBURGH UNIV.  CENTER FOR REGIONAL
        ECONOMIC STUDIES.  SUBJECT HEADING LIST
        USED TO INDICATE SOCIAL ASPECTS OF COST-BENEFIT
        ANALYSIS
B  *SOCIAL ACTIVITY
     USE  *ACTIVITY
B  *SOCIAL CHANGE
B  *SOCIAL CONDITIONS
        USE WHEN SOCIAL PATHOLOGY IS NOT INVOLVED
B  *SOCIAL DEVELOPMENT
        D  SOCIAL SURVEYS
B  *SOCIAL FUNCTIONS
        C  LEISURE
B  *SOCIAL PATHOLOGY
        F  CRIME
        F  NARCOTIC ADDICTION
        D  VANDALISM
        R  URBAN AFFAIRS
        R  MENTAL HEALTH
B  *SOCIAL PLANNING
        C  ACTION PROGRAMS
        D  COMMUNITY ORGANIZATIONS
        D  COMPENSATORY EDUCATION
        D  POVERTY PROGRAMS
        D  RELOCATION
        D  CAREER DEVELOPMENT
        D  PUBLIC WELFARE
        R  HEALTH FACILITIES
        R  SOCIAL RENEWAL
        R  SOCIAL STRATIFICATION
        R  HEALTH PLANNING
B  *SOCIAL RENEWAL
        F  HUMAN RENEWAL
        R  SKID-ROW
        R  SOCIAL PLANNING
        R  CAREER DEVELOPMENT
B  *SOCIAL SCIENCES
        D  ECONOMICS
        D  EKISTICS
        D  GEOGRAPHY
```

```
        D  HISTORY
        D  POLITICAL SCIENCE
        D  SOCIOLOGY
B  *SOCIAL SECURITY
        U  ECONOMIC SECURITY
        R  ELDERLY
B  *SOCIAL SERVICES
        F  COUNSELING SERVICE
        C  RELOCATION
        R  HEALTH SERVICES
        R  NEIGHBORHOOD SERVICE CENTER
        R  FAMILY PLANNING SERVICES
        R  PUBLIC WELFARE
        R  CONSUMER SERVICES
        R  LOCAL CITY HALLS
B  *SOCIAL STRATIFICATION
        R  SOCIAL PLANNING
        R  WORKING CLASS
B  *SOCIAL SURVEYS
        U  SOCIAL DEVELOPMENT
B  *SOCIAL UTILITY
B  *SOCIAL WELFARE
        F  PUBLIC ASSISTANCE
        U  HEALTH, WELFARE
B  *SOCIAL WORKERS
        U  PROFESSIONS
S   SOCIETIES
        S  PLANNING PROFESSION
        P  PLANNERS
B  *SOCIO-ECONOMIC STATUS
        U  POPULATION CHARACTERISTICS
        D  EDUCATIONAL ATTAINMENT
        D  FAMILY INCOME
B  *SOCIOLOGISTS
B  *SOCIOLOGY
        U  BEHAVIORAL SCIENCES
        U  SOCIAL SCIENCES
        D  RACE RELATIONS
        D  URBAN SOCIOLOGY
        R  ECOLOGY
B  *SOFTWARE
    USE  *SYSTEMS ANALYSIS
B  *SOILS
        U  NATURAL RESOURCES
        D  EROSION
        P  CONSERVATION
        R  AGRICULTURE
        R  PHYSIOGRAPHY
        INCLUDES THE CONSERVATION OF SOIL
B  *SOLAR ENERGY
        U  POWER
B  *SOLID WASTE DISPOSAL
        F  WASTE DISPOSAL
        U  WASTE MANAGEMENT
        R  REFUSE DISPOSAL
        R  INCINERATION
B  *SOUND
        F  ACOUSTICS
        F  NOISE
        U  ENVIRONMENTAL PROTECTION
        U  NUISANCES
        M  ABATEMENT
        P  CONTROLS
B  *SPACE
        U  DESIGN
B  *SPATIAL ANALYSIS
        D  LOCATION
```

D DENSITY
R REGIONAL SCIENCE
R URBAN FORM

S SPECIAL
S LIBRARIES

B *SPECIAL APPRAISALS
U RENEWAL PLANNING
R APPRAISAL
USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE.

B *SPECIAL DISTRICTS
U SUB-NATIONAL GOVERNMENT
D SCHOOL DISTRICTS
D WATER SYSTEMS
R AUTHORITIES
R REGIONAL COUNCILS

B *SPECIAL GROUPS
D CHILDREN
D ELDERLY
D MOTHERS
D DISPLACED PERSONS
D MIGRATORY WORKERS
D MINORITY GROUPS
D DEFENSE WORKERS
D VETERANS
D YOUTH
D STUDENTS
D HANDICAPPED
D DROPOUTS
GROUPING TERM

B =SPECIAL REPORTS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE

B *SPECIAL USES
U PLANNING LAW

S SPECIFICATIONS
S BUILDING EQUIPMENT
S BUILDING, HOUSING CODES

S SPECULATIVE
S BUILDING INDUSTRY

S SPEED
S TRAFFIC CONTROL SYSTEMS
S TRAFFIC

B *SPONSORS
D BUILDING SOCIETIES
D INSURANCE COMPANIES
D REDEVELOPMENT CORP.
R PRIVATE SECTOR
C BROCHURES
M CORPORATE
R NON-PROFIT HOUSING

B *SPORTS ACTIVITIES
U OUTDOOR RECREATION
U RECREATION
D HUNTING, FISHING
R RESORTS
R RECREATION PROGRAMS

B *SPOT ZONING
U ZONING
1966 URBAN LAND. A PRELIMINARY GLOSSARY

B *SPOT-DEMOLITION
U DEMOLITION
R CONSERVATION AREAS

B *SPRAWL
U URBAN FORM

B *SQUARES
R PLAZAS

B *SCUATTERS
R UNCONTROLLED DEVELOPMENT
B *STAFF
U ADMINISTRATIVE ORGANIZATION
D CONSULTANTS
C COMMUNITY ORGANIZATIONS
R IN-SERVICE TRAINING
B *STANDARD CONSOLIDATED AREAS
USE *SCA
B *STANDARD METROPOLITAN STATISTICAL AREA
USE *SMSA
B *STANDARD-OF-LIVING
USE *COST, STANDARD-OF-LIVIN
B *STANDARDIZATION
S STANDARDS
S RECREATIONAL FACILITIES
S RELOCATION
S RENEWAL
WHEN PROVIDED, WITH RENEWAL, MODIFY RENEWAL, NOT
RENEWAL AREAS. USE TO MODIFY A DESCRIPTOR WHEN
STANDARDS IS A SUBORDINATE RATHER THAN A
CO-ORDINATE CONSIDERATION
B *STANDARDS INFORMATION
D DESIGN STANDARDS
USED IN PREFERENCE TO STANDARDS, WHEN STANDARDS
INFORMATION IS OF STAND-ALONE RETRIEVAL VALUE
S STATE
S REQUIREMENTS
R INTERSTATE
R STATE-WIDE
S LEGISLATION
S LEGISLATIVE BODIES
S HOUSING PROGRAMS
S LEGISLATIVE HISTORY
S PERIODIC REPORTS
S ECONOMIC DEVELOPMENT
S HEARINGS
S AGENCIES
B *STATE AID
R FINANCING
R FINANCIAL ASSISTANCE
R STATE PROGRAMS
B *STATE FINANCE
B *STATE GOVERNMENT
U SUB-NATIONAL GOVERNMENT
C EXTENSION SERVICES
B *STATE OFFICIALS
USE *PUBLIC OFFICIALS
B *STATE PARKS
U OUTDOOR RECREATION
R NATIONAL PARKS
R PARKS
B *STATE PLANNING
R ECONOMIC DEVELOPMENT
B *STATE PROGRAMS
U INTERGOVERNMENTAL PROGRAMS
R FINANCIAL ASSISTANCE
R STATE AID
R INTERGOVERNMENTAL RELATIONS
INCLUDES STATE PARTICIPATION IN ACTIVITIES HITHERTO
PRIMARILY FEDERAL OR MUNICIPAL
S STATE-MUNICIPAL
S INTERGOVERNMENTAL RELATIONS
S STATE-WIDE
R STATE
S LAND USE PLANS
USE TO INDICATE THE STATE-WIDE NATURE OF ACTIVITIES

THAT HAVE CUSTOMARILY BEEN CONDUCTED ON A LOCAL BASIS

B *STATES

B *STATISTICAL METHODS

B *STATISTICS
U FORMATS
P DATA
USED AS FORMAT TERM ONLY TO INDICATE PHYSICAL REPRESENTATION OF DATA. FOR DISCUSSIONS, TECHNIQUES, ETC., USE, DATA.

B *STATUTES
USE *LAW, LAWS
FOR TEXTS OF STATUTES, USE FORMAT TERM LEGAL TEXTS.

B *STEEL CONSTRUCTION
U BUILDING TECHNOLOGY

B *STEEL INDUSTRY
U INDUSTRY

B *STOCHASTIC PROCESS
USE *DYNAMIC PROCESS

B *STOCKYARDS
1965 STANDARD LAND USE CODING MANUAL

B *STORES
U BUILDINGS/COMMERCIAL
U COMMERCIAL AREAS
D DEPARTMENT STORES
R RETAIL TRADE

B *STORMS
U DISASTERS
U CLIMATE

B *STREET ADDRESSES
F HOUSE NUMBERING
R LOTS, PARCELS

B *STREET FURNITURE
U PUBLIC IMPROVEMENTS
R AMENITIES

B *STREET LIGHTING
U PUBLIC IMPROVEMENTS

B *STREET WIDENING
U PUBLIC IMPROVEMENTS
U STREETS

B *STREETS
F BOULEVARDS
U CIRCULATION
U CIRCULATION ELEMENTS
D ALLEYS
D ARCADES
D CUL-DE-SAC
D INTERSECTIONS
D MEWS
D PATHS
D STREET WIDENING
M LOCAL
M ARTERIAL
R PEDESTRIANWAYS

B *STRIPS
U URBAN FORM/LINEAR

B *STRUCTURAL ENGINEERING
U BUILDING TECHNOLOGY
U ENGINEERING

B *STRUCTURE ACQUISITION
F ACQUISITION OF STRUCTURE
R LAND ACQUISITION
APPLIES TO THOSE ACQUISTIONS WHICH INVOLVE BUILDINGS OR OTHER IMPROVEMENTS APART FROM THE LAND. IF EITHER LAND ALONE OR LAND PLUS STRUCTURES IS INVOLVED, USE LAND ACQUISITION.

B *STRUCTURES
D BRIDGES

D BUILDINGS
D DAMS
D TUNNELS
D VIADUCTS
M UNDER CONSTRUCTION

B *STUDENT AID
U FINANCIAL ASSISTANCE
R FELLOWSHIPS, SCHOLARSHIPS

B *STUDENTS
U SPECIAL GROUPS

B *STYLE MANUALS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.

B *SUB-NATIONAL GOVERNMENT
U PUBLIC ADMINISTRATION
D STATE GOVERNMENT
D COUNTIES
D CONGRESSIONAL DISTRICTS
D SPECIAL DISTRICTS
D METROPOLITAN AREA GOVERNMENT
D MUNICIPAL GOVERNMENT
D LOCAL GOVERNMENT

B *SUBDIVISION REGULATIONS
U LAND USE CONTROLS
R LOT SIZE
R ZONING REQUIREMENTS
MANY OF THE DOWN-TERMS UNDER ZONING REQUIREMENTS APPLY

B *SUBDIVISIONS
F PLATTING
F TRACTS
U DEVELOPMENTS/RESIDENTIAL
U PLANNING LAW
R CLUSTERS
R PUBLIC IMPROVEMENTS
1965/01 HOUSING AND PLANNING REFERENCES

B *SUBSIDIES
U FINANCIAL ASSISTANCE
D RENT SUPPLEMENTS

S SUBSTANDARD
S HOUSING

B *SUBURBS
F DORMITORY TOWNS
D GARDEN CITIES
R NEW TOWNS
R SATELLITES
RESIDENTIAL AREAS OR COMMUNITIES ADJACENT TO A CITY

B *SUBWAYS
U RAPID TRANSIT
U TRANSPORT SYSTEMS
U VEHICLES

B *SUPERBLOCKS
U BLOCKS
U URBAN FORM
U SCALE

B *SUPERMARKETS
U SHOPPING CENTERS

B *SUPERSTRUCTURE
R BUILDINGS
R POLITICS

B *SUPERVISION

B *SUPPLIES
1965 URBAN PLANNING BULLETIN NO.1 INFORMATION
SYSTEM FOR URBAN PLANNING URA

B *SUPPLY
USE *MARKET

B *SURVEY, PLANNING APPLIC
U RENEWAL PLANNING

```
        R  PART I
        R  PART II
        USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE
        LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B   *SURVEYING
        U  ENGINEERING
B   *SURVEYS
        U  METHODOLOGY
B   *SWIMMING
        D  POOLS
        R  BEACHES
B   *SYSTEMS
        R  NETWORKS
        R  SYSTEMS MANAGEMENT
B   *SYSTEMS ANALYSIS
        F  SOFTWARE
        U  MANAGEMENT SCIENCE
        U  DATA PROCESSING
        D  RESEARCH DESIGN
        R  SYSTEMS MANAGEMENT
        R  COMPUTERS
        R  PROGRAMMING
        R  SYSTEMS DOCUMENTATION
B   *SYSTEMS DOCUMENTATION
        R  SYSTEMS ANALYSIS
        INCLUDES FLOW CHARTS
B   *SYSTEMS MANAGEMENT
        U  MANAGEMENT SCIENCE
        R  SYSTEMS
        R  SYSTEMS ANALYSIS
B   *TARIFF
     USE  *CHARGES
B   *TAX ABATEMENT
        U  TAXATION
B   *TAX BASE
        F  ASSESSED VALUE
        U  LAND VALUES
        U  URBAN ECONOMICS
        D  TAX EXEMPTIONS
        R  ASSESSMENT
B   *TAX BENEFITS
     USE  *TAX INCENTIVES
B   *TAX DELINQUENT
     USE  *REAL PROPERTY LAW
B   *TAX DELINQUENT LAND
     USE  *DEAD LAND
B   *TAX EXEMPTIONS
        F  IN-LIEU PAYMENTS
B   *TAX INCENTIVES
        F  TAX BENEFITS
        U  FINANCIAL ASSISTANCE
        C  INVESTMENTS
B   *TAX RATES
        U  TAXATION
B   *TAX REVENUES
        U  RESOURCES
        U  FINANCIAL SOURCES
        U  REVENUES
        R  ALLOCATION
B   *TAX SHARING
        U  TAXATION
        R  TAX REVENUES
        R  INTERGOVERNMENTAL RELATIONS
        R  REVENUE SHARING
B   *TAX-PAYER
        U  BUILDINGS/COMMERCIAL
        PROPERTY COMPOSED OF STORES, GENERALLY ONE STORY
```

HIGH, NOT INDIVIDUALS WHO PAY TAXES

B *TAXATION
D REAL PROPERTY TAXES
D SALES TAX
D USE TAX
D TAX RATES
D INCOME TAX
D TAX ABATEMENT
D LAND TAX
D TAX SHARING
R EQUALIZATION
R ASSESSMENT

B *TAXICABS
U VEHICLES

B *TEACHERS

B *TEACHING MACHINES
U EDUCATION
R PROGRAMMED LEARNING

B *TECHNICAL ASSISTANCE
D EXTENSION SERVICES
C FINANCIAL ASSISTANCE
R UNDERDEVELOPED COUNTRIES
INCLUDES MANPOWER + TRAINING ALONG WITH THE NECESSARY FINANCIAL SUPPORT, EITHER NATIONALLY OR ABROAD. THIS ASSISTANCE MAY TAKE THE FORM OF URBAN OR RURAL EXTENSION PROGRAMS OFFERED BY UNIVERSITIES TO PUBLIC AGENCIES AND THEIR OFFICIALS TOWARDS SOLUTION OF URBAN PROBLEMS.

B *TECHNICAL MANPOWER
USE *MANPOWER

B *TECHNOLOGY
D BUILDING TECHNOLOGY
P BUILDINGS

B *TELEPHONE, TELEGRAPH
U COMMUNICATIONS

B *TEMPORARY HOUSING
R MOBILE HOUSING
R RENEWAL AREAS
C BUILDING TECHNOLOGY
INCLUDES UNITS THAT ARE ENTIRELY OR PARTIALLY MOVABLE

B *TENANT AND LANDLORD
USE *LANDLORD AND TENANT

B *TENANT ASSOCIATIONS
U COMMUNITY ORGANIZATIONS
U PROTEST ACTION
R PROPERTY MANAGEMENT

B *TENANT-OCCUPANCY
U TENURE
R RENTAL HOUSING

B *TENANTS

B *TENEMENTS
F NEW LAW//OLD LAW
U MULTIPLE DWELLINGS
R SLUMS
R CODE ENFORCEMENT
GENERALLY REFERS TO MULTIPLE DWELLINGS BUILT PRIOR TO ADOPTION OF BUILDING CODES

B *TENURE
F LAND TENURE
U REAL PROPERTY LAW
D OWNER-OCCUPANCY
D SALE-LEASEBACK
D TENANT-OCCUPANCY
D CONDOMINIUMS
D COOPERATIVES
R LANDLORD AND TENANT
R LAND OWNERSHIP

B *TERMINALS
U CIRCULATION ELEMENTS
U TRANSPORT SYSTEMS
D AIRPORTS
C PORTS
R NODES
B *TERRACES
U ARCHITECTURAL FEATURES
B *TEXTBOOKS
U FORMATS
ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
B *TEXTILE INDUSTRIES
U MANUFACTURING
B *TEXTURE
U AESTHETICS
1960 LYNCH, KEVIN. THE IMAGE OF THE CITY
B *THE CITY
USE *CITIES, TOWNS
B *THE POOR
USE *UNDERPRIVILEGED
B *THEATERS
U ASSEMBLY PLACES
R ENTERTAINMENT
R PERFORMING ARTS
B *THERMAL CONTROLS
F AIR CONDITIONING
F HEATING
F VENTILATION
U BUILDING EQUIPMENT
B *THESAURUS SOURCES
SOURCES OF CANDIDATES FOR URBANDOC THESAURUS
B *THOROUGHFARE PLANS
USE *CIRCULATION PLANS
B *TIME-DISTANCE
USE *TRIPS
B *TIME-ZONING
U ZONING
C AMORTIZATION
R LAND RESERVES
1966 URBAN LAND. A PRELIMINARY GLOSSARY
ZONING REGULATIONS APPLIED TO A RESTRICTED PERIOD
AFTER WHICH PRESENT USAGE PROHIBITED
B *TITLE I
U RENEWAL
REFERS TO HOUSING ACT OF 1949 AS AMENDED
B *TOLLS
USE *CHARGES
B *TOPOGRAPHICAL FEATURES
F GRADE
U NATURAL RESOURCES
D DRAINAGE
D FLOOD PLAINS
D SLOPES
INCLUDES TOPOGRAPHY
B *TOURISM
U BUSINESS
R LEISURE
R RESORTS
R TRAVELLER SERVICES
B *TOWN MEETINGS
U POLITICS
U LOCAL GOVERNMENT
R CITIZEN PARTICIPATION
B *TOWNHOUSES
U ATTACHED HOUSES
R BROWNSTONES
B *TOWNSCAPE

USE *URBAN DESIGN

B *TOWNSHIPS
U COUNTIES

B *TRACTS
USE *SUBDIVISIONS

B *TRADE
USE *BUSINESS

B *TRADE CENTERS
U COMMERCIAL AREAS
R CBD

B *TRADE SCHOOLS
F VOCATIONAL EDUCATION
U EDUCATIONAL FACILITIES
C POVERTY PROGRAMS

B *TRADE UNIONS
U UNIONS
D BUILDING TRADES

B *TRAFFIC
U CIRCULATION
M SPEED
R REVERSE COMMUTING
INCLUDES CONGESTION, FLOW, GENERATION, SAFETY AND CONTROL

B *TRAFFIC CONTROL SYSTEMS
U TRAFFIC ENGINEERING
M SPEED

B *TRAFFIC ENGINEERING
D TRAFFIC CONTROL SYSTEMS

B *TRAILS
USE *PATHS

B *TRAINING PROGRAMS
R IN-SERVICE TRAINING
R CAREER DEVELOPMENT
R FELLOWSHIPS, SCHOLARSHIPS
R URBAN AFFAIRS
R CITIZEN PARTICIPATION
R PUBLIC OFFICIALS
R PROGRAMMED LEARNING

B *TRAINING//RETRAINING
USE *CAREER DEVELOPMENT

B *TRAINS
USE *RAILROADS

B *TRANSIENT HOUSING
C HOTELS, MOTELS
D MOBILE HOUSING
C ROOMS, ROOMING HOUSES

B *TRANSIT
USE *RAPID TRANSIT

B *TRANSPORT EQUIPMENT
R RAPID TRANSIT
R RAILROADS
R HSGT

B *TRANSPORT SYSTEMS
U TRANSPORTATION
D BUSES
D RAILROADS
C AIR LINES
C RAPID TRANSIT
C SHIPS
D CROSSINGS
D FREIGHT
D BUS-RAIL SYSTEMS
R HSGT

B *TRANSPORT SYSTEMS/LOCAL
USE *TRANSPORT SYSTEMS
U INFRASTRUCTURE
FULL SUBSTITUTION TRANSPORT SYSTEMS/LOCAL

B *TRANSPORT TECHNOLOGY
U TRANSPORTATION
C HSGT
INCLUDES THE RESEARCH AND APPLICATION OF NEW MODES OF HIGH SPEED TRANSPORTATION, SUCH AS VERTICAL RISE AIRCRAFT, MONORAILS, ETC.

B *TRANSPORTATION
D AIR TRANSPORT
D MARINE TRANSPORT
D RAIL TRANSPORT
D CIRCULATION
D MASS TRANSPORTATION
D TRANSPORT SYSTEMS
D TRIPS
D TRANSPORT TECHNOLOGY
P LOCAL
C NETWORKS
C PLANS

B *TRANSPORTATION ECONOMICS
R TRANSPORTATION PLANNING

B *TRANSPORTATION MODELS
U TRANSPORTATION PLANNING
U MODELS

B *TRANSPORTATION PLANNING
D CIRCULATION PLANS
D TRANSPORTATION MODELS
R TRANSPORTATION ECONOMICS
R AIRPORT PLANNING
R USER STUDIES

B *TRANSPORTATION STUDY

B *TRAVEL PATTERNS
USE *TRIPS

B *TRAVEL TIME
U TRIPS

B *TRAVELLER SERVICES
D SERVICE STATIONS
R ROADSIDES
R TOURISM

B *TREES
U BOTANICAL FEATURES

B *TRIPS
F WORK TRIPS
F TIME-DISTANCE
F TRAVEL PATTERNS
U TRANSPORTATION
D JOURNEY TO WORK
D COMMUTING
D ORIGIN//DESTINATION
D TRAVEL TIME
D RECREATIONAL TRIPS
C MODELS
R REVERSE COMMUTING
INCLUDES GENERATION AND DISTRIBUTION

B *TRUCKS, TRUCKING
U FREIGHT
U HIGHWAYS
U VEHICLES
R LOADING ZONES

B *TUNNELS
U CROSSINGS
U STRUCTURES

B *TURNKEY
U HOUSING ASSIST
R LOW-RENT HOUSING
R PUBLIC HOUSING
R DEVELOPERS

B *U.S. HOUSING & URBAN DEVELOPMENT DEPT.

USE *HUD
B *U.S. HOUSING AND URBAN DEVELOPMENT DEPT. LIBRARY
USE *HUD LIBRARY
B *U.S. TRANSPORTATION DEPT.
USE *DOT
B *UNCONTROLLED DEVELOPMENT
R SQUATTERS
S UNDER CONSTRUCTION
S HIGHWAYS
S STRUCTURES
B *UNDERDEVELOPED AREAS
U LAND RESOURCES
ANY GEOGRAPHIC AREA WHICH IS UNDERUTILIZED REGARDLESS OF SIZE
B *UNDERDEVELOPED COUNTRIES
F DEVELOPING COUNTRIES
R TECHNICAL ASSISTANCE
S UNDERGROUND
S UTILITIES
S INDUSTRY
B *UNDERPRIVILEGED
F THE POOR
INCLUDES BOTH CULTURALLY AND ECONOMICALLY DISADVANTAGED
S UNDEVELOPED
B *UNEMPLOYMENT
USE *EMPLOYMENT
B *UNIFORM LEGISLATION
U LEGISLATION
B *UNIONS
U LABOR
D TRADE UNIONS
B *UNIQUE INTEREST
USE SPARING TO IDENTIFY DOCUMENT WHERE METHODOLOGY OR GRAPHIC PRESENTATION WARRANT SPECIAL ATTENTION
S UNITS
S HOUSING STOCK
B *UNIVERSITIES
USE *COLLEGES, UNIVERSITIES
S UP-POSTED
B *UPAP
F URBAN PLANNING ASSISTANCE PROGRAM
D UPAP REPORT
RELATED TO SECTION 701 OF HOUSING ACT OF 1954, AS AMENDED
B *UPAP REPORT
U UPAP
P RESEARCH PROJECTS
S URBAN
B *URBAN AESTHETICS
USE *URBAN DESIGN
B *URBAN AFFAIRS
R SOCIAL PATHOLOGY
R URBAN SOCIOLOGY
C RESEARCH
R TRAINING PROGRAMS
R FELLOWSHIPS, SCHOLARSHIPS
USE FOR DISCUSSION OF PROBLEMS GENERATED WITHIN URBAN AREAS
B *URBAN ANTHROPOLOGY
B *URBAN AREAS
R METROPOLITAN AREAS
R URBAN DEVELOPMENT
C URBAN AFFAIRS
INCLUDES URBAN AND SUBURBAN AREAS OR DEVELOPMENTS EXCLUDING RURAL AREAS.
B *URBAN BEAUTIFICATION

```
    USE  *BEAUTIFICATION
B  *URBAN DATA CENTERS
    USE  *INFORMATION CENTERS
B  *URBAN DESIGN
        F  TOWNSCAPE
        F  URBAN AESTHETICS
        U  AESTHETICS
        D  ARCHITECTURAL CONTROLS
        D  ARCHITECTURE
        D  BEAUTIFICATION
        D  VISUAL ELEMENTS
        R  ENVIRONMENTAL DESIGN
        R  PHYSICAL PLANNING
        R  URBAN FORM
        R  URBAN PLANNING
        INCLUDES DISCUSSIONS OF URBAN AESTHETICS
B  *URBAN DEVELOPMENT
        D  PUBLIC FACILITIES
        D  REVITALIZATION
        D  LAND DEVELOPMENT
        D  MODEL CITIES PROGRAM
        R  RENEWAL
        R  URBAN PLANNING
        R  URBAN AREAS
        R  DEVELOPMENT PLANS
B  *URBAN ECONOMICS
        U  ECONOMICS
        D  LAND USE
        D  ECONOMIC BASE
        D  HOUSING ECONOMICS
        D  TAX BASE
        C  CLASSIFICATION
        P  PLANNING
        R  TRANSPORTATION ECONOMICS
        DEALS WITH THE ANALYSIS, CLASSIFICATION   PLANNING
        OF LAND USE
B  *URBAN ENVIRONMENT
        F  ENVIRONMENT
        D  URBANIZATION
        D  LAND ECONOMICS
        D  URBAN SOCIOLOGY
        D  MAN
        R  URBAN FORM
        BROAD TERM TO INDICATE THE TOTALITY OF THE URBAN
        SCENE - PHYSICAL, CULTURAL, ECONOMIC AND PHILOSOPHICAL
B  *URBAN FORM
        D  CLUSTERS
        D  CORE
        D  CENTRES
        D  FRINGE AREAS
        D  OPEN SPACE
        D  SPRAWL
        D  SUPERBLOCKS
B  *URBAN FORM (CONT)
        R  OPEN SPACE
        R  SPATIAL ANALYSIS
        R  LOCATION
        R  PHYSICAL PLANNING
        R  URBAN GEOGRAPHY
        M  CIRCULAR
        M  LINEAR
        M  RADIAL
        R  URBAN ENVIRONMENT
        R  URBAN DESIGN
        THE USE OF SPACE ON A SCALE OF CITIES OR REGIONS.
        IMPLIES AESTHETIC CONSIDERATIONS, BUT NOT EXCLUSIVELY
        SO.
```

B *URBAN FORM/CIRCULAR
USE *URBAN FORM
D RINGS
FULL SUBSTITUTION URBAN FORM/CIRCULAR
B *URBAN FORM/LINEAR
USE *URBAN FORM
D CORRIDORS
D STRIPS
FULL SUBSTITUTION URBAN FORM/LINEAR
B *URBAN GEOGRAPHY
U GEOGRAPHY
D LOCATION THEORY
R URBAN FORM
B *URBAN HISTORY
U HISTORY
P URBAN PLANNING
R CITIES, TOWNS
R HISTORIC PLANS
R URBANIZATION
FOR HISTORY OF URBAN AREAS IN GENERAL, OR OF A
PARTICULAR CITY.
B *URBAN INFORMATION SYSTEMS
USE *INFORMATION SYSTEMS
B *URBAN OBSERVATORIES
B *URBAN PLANNING
F CITY PLANNING
U ENVIRONMENTAL DESIGN
D PLANNED COMMUNITIES
D COMPREHENSIVE PLANNING
R URBAN DESIGN
B *URBAN PLANNING (CONT)
R PLANNING PROCESS
R REGIONAL PLANNING
R URBAN DEVELOPMENT
R ARCHITECTURE
P URBAN HISTORY
P VISUAL ELEMENTS
R CITIES, TOWNS
C DYNAMIC PROCESS
C RESEARCH
CONCERNED WITH THE PROGRAMMING FOR THE DEVELOPMENT
OF URBANIZED AREAS. INCLUDES PHYSICAL CONSIDERATIONS.
B *URBAN PLANNING ASSISTANCE PROGRAM
USE *UPAP
B *URBAN SOCIETY
USE *URBAN ENVIRONMENT
B *URBAN SOCIOLOGY
U URBAN ENVIRONMENT
U SOCIOLOGY
C ELDERLY
R URBANITY
R URBAN AFFAIRS
B *URBAN UNIVERSITIES
R COLLEGES, UNIVERSITIES
APPLIES TO THOSE UNIVERSITIES AND COLLEGES LOCATED
WITHIN METROPOLITAN AREAS WHERE PROBLEMS OF PROXIMITY
TO TRANSPORTATION AND THE CBD PREVAIL
B *URBAN-RURAL
FOR DISCUSSIONS OF CONTRASTS BETWEEN THE TWO TYPES OF
AREAS
B *URBANITY
R CITIES, TOWNS
R URBAN SOCIOLOGY
B *URBANIZATION
U URBAN ENVIRONMENT
R DYNAMIC PROCESS
R CITIES, TOWNS

```
        R  ECONOMIC DEVELOPMENT
        R  URBAN HISTORY
        PROCESS OF CHANGE
B  *USE CHARGES
        U  CHARGES
B  *USE TAX
        U  TAXATION
B  *USE VALUE
        R  APPRAISAL
        VALUE OF A SITE AS DETERMINED BY PUBLIC AUTHORITY,
        BASED ON ITS USE RATHER THAN ON ITS ASKING PRICE OR
        MARKET VALUE
B  *USED HOUSING
        U  LOW-RENT HOUSING
B  *USER STUDIES
        R  RECREATIONAL FACILITIES
        R  TRANSPORTATION PLANNING
B  *UTILITIES
        F  PUBLIC UTILITIES
        R  GAS
        R  WATER SYSTEMS
        R  ELECTRICITY
        R  UTILITIES PLANS
B  *UTILITIES PLANS
        F  PUBLIC UTILITY PLANS
        U  COMPREHENSIVE PLANS
        U  PLANS
        R  UTILITIES
S   UTILIZATION
        S  MANPOWER
        S  NATURAL RESOURCES
        S  WATER RESOURCES
B  *UTOPIAS
B  *VACANCY
     USE  *OCCUPANCY//VACANCY
B  *VACANT LAND
        F  IDLE LAND
        U  LAND RESOURCES
        C  IMPROVED LAND
        R  OPEN SPACE
        R  LOTS, PARCELS
B  *VACATION HOUSES
     USE  *SEASONAL HOUSING
B  *VALUATION
        D  MARKET VALUE
        D  APPRAISAL
        D  DEPRECIATION
        PROCESS OF ASCERTAINING THE WORTH OF PROPERTY NOT
        NECESSARILY FOR TAXATION
B  *VANDALISM
        U  SOCIAL PATHOLOGY
        R  PROPERTY MANAGEMENT
B  *VARIANCES
        U  ZONING
        R  NON-CONFORMANCE
B  *VEHICLES ,
        U  CIRCULATION
        D  AIRCRAFT
        D  AUTOMOBILES
        D  BUSES
        D  AIR-CUSHIONED VEHICLES
        D  RAILROADS
        D  SHIPS
        D  TAXICABS
        D  TRUCKS, TRUCKING
        M  ELECTRIC
        GROUPING TERM
```

B *VENDING MACHINES
U ACCESSORY USES
U RETAIL TRADE
B *VENTILATION
USE *THERMAL CONTROLS
B *VERTICAL RISE AIRCRAFT
U AIRCRAFT
D HELICOPTERS
INCLUDES SUCH VEHICLES AS STOL AND VTOL. ALSO INCLUDES TAKE-OFF AND LANDING FACILITIES
B *VESTPOCKET HOUSING
R SCATTERED SITE HOUSING
B *VESTPOCKET PARKS
U PARKS
B *VETERANS
U SPECIAL GROUPS
B *VIADUCTS
U CROSSINGS
U STRUCTURES
S VIOLATIONS
S ZONING ORDINANCES
S CODES
S VISIBILITY
B *VISUAL AIDS
U GRAPHIC [illegible]LAYS
R EDUCATION
B *VISUAL ELEMENTS
U URBAN DESIGN
D ILLUMINATION
D MODULAR COORDINATION
C COMPREHENSIVE PLANNING
P CITIES, TOWNS
R BEAUTIFICATION
P URBAN PLANNING
R ARCHITECTURE
REFERS TO THE PHYSICAL ELEMENTS OF THE URBAN ENVIRONMENT IN TERMS OF THEIR AESTHETIC RELATIONSHIPS. THESE CONSIDERATIONS ARE ON INDIVIDUAL PARTS OF THE URBAN LANDSCAPE RATHER THAN ON THE TOTAL CITY. INCLUDES VIEW, VISTA AND PANORAMA.
B *VITAL STATISTICS
F MORTALITY
F NATALITY
U POPULATION CHARACTERISTICS
D MARRIAGE
B *VOCATIONAL EDUCATION
USE *TRADE SCHOOLS
B *VOCATIONS
USE *OCCUPATIONS
S VOLUME
B *VOLUNTEER WORK
R COMMUNITY ORGANIZATIONS
B *VOTING
U POLITICS
D APPORTIONMENT
R REFERENDUM
INCLUDES VOTERS
B *WAGES
U INCOME
D FRINGE BENEFITS
R SALARIES
B *WALLS
U BUILDINGS
B *WAREHOUSES
U BUILDINGS/COMMERCIAL
U COMMERCIAL AREAS
INCLUDES WAREHOUSING + STORAGE

B *WASTE DISPOSAL
USE *SOLID WASTE DISPOSAL
B *WASTE MANAGEMENT
U ENVIRONMENTAL PROTECTION
U COMMUNITY FACILITIES
D SALVAGE
D SANITATION
D SOLID WASTE DISPOSAL
D REFUSE DISPOSAL
D INCINERATION
R SEWERAGE
B *WATER
D WATER POLLUTION
D WATER RESOURCES
D WATER SYSTEMS
D WATERSHEDS
D WATERWAYS
P ALLOCATION
B *WATER ALLOCATION
R WATER SYSTEMS
B *WATER DISTRICTS
USE *WATER SYSTEMS
B *WATER POLLUTION
U ENVIRONMENTAL PROTECTION
U NUISANCES
U WATER
R INDUSTRIAL WASTE
M ABATEMENT
P CONTROLS
B *WATER RESOURCES
F GROUND WATER
U NATURAL RESOURCES
U WATER
D DAMS
D RIVER BASINS
M ALLOCATION
M UTILIZATION
R PHYSIOGRAPHY
B *WATER SYSTEMS
F WATER DISTRICTS
F WELLS
U SPECIAL DISTRICTS
U PUBLIC FACILITIES
U WATER
U COMMUNITY FACILITIES
D RESERVOIRS
D IRRIGATION
C NETWORKS
M METERED
R WATER ALLOCATION
R UTILITIES
B *WATER SYSTEMS/LOCAL
USE *WATER SYSTEMS
U INFRASTRUCTURE
FULL SUBSTITUTION WATER SYSTEMS/LOCAL
B *WATERFRONTS
F SHORE LINE
U RIPARIAN
D BEACHES
D RESERVOIRS
D ISLANDS
D DAMS
R MARINAS
R PORTS
BOTH COASTAL AND INLAND
B *WATERSHEDS
U WATER

R RIVER BASINS
B *WATERWAYS
U WATER
D CANALS
D LAKES
D RIVERS
R RIVER BASINS
REFERS TO BODIES OF WATER
B *WELFARE
USE *PUBLIC WELFARE
B *WELLS
USE *WATER RESOURCES
B *WETLANDS
U LAND RESOURCES
R RECLAMATION
INCLUDES BOGS, MARSHES AND SWAMPS
B *WHITES
B *WHOLESALE TRADE
U BUSINESS
C SALES
B *WILD LIFE
R ECOLOGICAL STUDIES
R WILDERNESS AREAS
B *WILDERNESS AREAS
R WILD LIFE
B *WINTER SPORTS
U SPORTS ACTIVITIES
B *WOOD CONSTRUCTION
U BUILDING TECHNOLOGY
B *WORK PROGRAMMING
USE *PROGRAMMING
B *WORK TRIPS
USE *TRIPS
TRAVEL AS PART OF WORK AS IN SELLING, DISTINGUISHED FROM JOURNEY-TO-WORK
B *WORKABLE PROGRAM
R CITIZEN PARTICIPATION
R CODE ENFORCEMENT
R NEIGHBORHOOD ANALYSES
R CERTIFICATION
SET OF REQUIREMENTS ESTABLISHED BY THE PREDECESSOR OF HUD. MUST BE ESTABLISHED BEFORE MUNICIPALITY QUALIFIES FOR RENEWAL ASSIST. REQUIRES ANNUAL RECERTIFICATION AND PROOF OF PROGRESS. ALL WORKABLE PROGRAM REPORTS CONTAIN, BY DEFINITION, DISCUSSIONS OF CODE ENFORCEMENT, CITIZEN PARTICIPATION, RELOCATION, NEIGHBORHOOD ANALYSIS, COMPREHENSIVE PLANNING.
B *WORKABLE PROGRAM APPLIC
U RENEWAL PLANNING
USE ONLY FOR THE DOCUMENTS REQUIRED BY HUD FROM THE LPA IN ORDER TO OBTAIN RENEWAL ASSISTANCE
B *WORKING CLASS
F BLUE COLLAR CLASS
R SOCIAL STRATIFICATION
B *WORKING CONDITIONS
U LABOR
B *WORKSHOPS
R CONFERENCES
B *WRITE-DOWN
R RENEWAL
R LAND ACQUISITION
1966 URBAN LAND. A PRELIMINARY GLOSSARY
SUBSIDY ENABLING LAND COST REDUCTIONS FOR URBAN REDEVELOPMENT PROJECTS FROM ACQUISITION COST TO USE VALUE
B *YARDS
U LOTS, PARCELS

```
        U  ZONING REQUIREMENTS
        ZONING TERM FOR OPEN, UNOCCUPIED SPACE SURROUNDING A
        STRUCTURE DELIMITED BY THE LOT LINES
B   ●YEAR OCCHS, ALMANACS
        F  ALMANACS
        U  FORMATS
        ENTER UNDER FORMAT ANALYSIS WHERE APPLICABLE.
S    YEARLY
     USE  ANNUAL
B   ●YOUTH
        U  SPECIAL GROUPS
        R  CHILDREN
B   ●ZONES
        C  POSTAL SERVICES
        C  RAPID TRANSIT
        F  ZONING
        F  ZONING ORDINANCES
        A GEOGRAPHIC DESIGNATION THE PARAMETERS OF WHICH ARE
        DEFINED BY THE INSTITUTION APPLYING THEM
B   ●ZONING
        U  LAND USE CONTROLS
        U  PLAN IMPLEMENTATION
        S  SPOT ZONING
        S  TIME-ZONING
        S  VARIANCES
        S  FLOOD PLAINS ZONING
        F  ZONES
        S  DENSITY
        R  FLEXIBLE
        R  PERFORMANCE STANDARDS
B   ●ZONING ADMINISTRATION
        U  BUILDING PERMITS
        U  ENFORCEMENT
        U  NON-CONFORMANCE
        R  ADMINISTRATIVE LAW
        R  MODEL ORDINANCE
B   ●ZONING DISTRICTS
        R  MODEL ORDINANCE
B   ●ZONING ORDINANCES
        U  PLANNING LAW
        U  PERMITS
        U  LEGISLATION/PROCEDURE
        F  ZONES
        ENTER UNDER SPECIFIC ANALYSIS WHERE APPLICABLE.
B   ●ZONING REQUIREMENTS
        U  BUILDING LINE
        S  BUILD. ACCESS
        S  FLOOR AREA RATIO
        U  FLOOR SPACE AREA
        U  FRONTAGE
        S  LOADING SPACES
        U  LOT SIZE
        S  OPEN SPACE RATIO
        S  PARKING
        S  SET-BACK
        S  YARDS
        R  DWELLING UNIT REQUIREMENTS
B   ●ZONE
        U  BOUNDARIES
```

RIVER BASINS
PATHWAYS
BEACHES
REALTIFICATION
REALTIFICATION ASSESS
RECYCLING
BEHAVIORAL SCIENCES
GREEN BELTS
BENEFITS
BRIDGE BENEFITS
BEST USE
BIBLIOGRAPHY
BICYCLING
BIDS, BIDDING
BIDS, BIDDING
SIGNS, BILLBOARDS
BIOGRAPHY
BIOLOGICAL SCIENCES
BIRTH
BLOCK GRANTS
BLOCKBUSTING
BLOCKS
BOATING
LEGISLATURE BODIES
BOND ISSUES
PRINCIPAL BONDS
BONDS
YEAR BOOKS, ALMANACS
BOTANICAL FEATURES
BOTANICAL GARDENS, ARBORETUMS
BOULDERS
BRICK CONSTRUCTION
BRIDGES
BRIEFS
BROCHURES
BROWNSTONES
CAPITAL BUDGETS
BUDGETS
BUFFER STRIPS
BUILDING AND LOAN ASSOCIATIONS
BUILDING CODES
BUILDING CONDITIONS
BUILDING CYCLES
BUILDING EQUIPMENT
BUILDING INVESTORS
BUILDING LOSS
BUILDING PERMITS
BUILDING SITES
BUILDING SPECIFICS
BUILDING TECHNOLOGY
BUILDING TECHNOLOGY (CONT)
BUILDING TRADES
BUILDINGS
BUILDINGS
BUILDINGS (CONT)
BUILT-UP AREAS
BUS, BUSES
BUS-RAIL SYSTEMS
BUSES
REAL ESTATE BUSINESS
BUSINESS
BUSINESS
BUSINESS (CONTINUED)
BUSINESS LOANS
BUSINESS OPPORTUNITIES
BY LAWS
BY LAWS
BY LAWS
BY-PASS
CABLE, CABLES
CABLE, CABLES
CABLE, CABLES (CONT)
CABLE, CABLES (CONT)
CABLE, CABLES (CONT)

COMMISSION PLAN
PLANNING COMMISSIONS
ART COMMISSIONS
COMMUNICATIONS
COMMUNICATIONS THEORY
NEW COMMUNITIES
PLANNED COMMUNITIES
COMMUNITIES
COMMUNITY CENTERS
COMMUNITY COUNCILS
COMMUNITY DEVELOPMENT
COMMUNITY FACILITIES
COMMUNITY FACILITIES PLANS
COMMUNITY IMPROVEMENT
COMMUNITY ORGANIZATIONS
COMMUNITY PLANNING
COMMUNITY RELATIONS
COMMUNITY ROOMS
COMMUNITY STRUCTURE
COMMUTING
REVERSE COMMUTING
COMPACTS
INSURANCE COMPANIES
COMPANY ROLE
COMPARATIVE STUDIES
COMPARISONS
COMPATIBILITY
COMPENSATION
COMPENSATORY EDUCATION
AWARDS, COMPETITIONS
COMPLIANCE
COMPREHENSIVE
COMPREHENSIVE PLANNING
COMPREHENSIVE PLANS
COMPUTER GRAPHICS
COMPUTERS
BUSINESS CONCERNS
CONCESSIONS, PRIVILEGES
CONCRETE CONSTRUCTION
BUILDING CONDITIONS
ECONOMIC CONDITIONS
SOCIAL CONDITIONS
WORKING CONDITIONS
CONDOMINIUMS
CONFERENCES
CONFIDENTIALITY
CONFORMANCE
CONGESTION
CONGRESSIONAL DISTRICTS
CONSERVATION
CONSOLIDATION
CONSTITUTIONS
BRICK CONSTRUCTION
ELEVATED CONSTRUCTION
CONSTRUCTION
CONCRETE CONSTRUCTION
DEPRESSED CONSTRUCTION
STEEL CONSTRUCTION
UNDER CONSTRUCTION
WOOD CONSTRUCTION
CONSTRUCTION INDUSTRY
CONSULTANT REPORTS
CONSULTANTS
CONSUMER SERVICES
CONSUMERS
CONSUMPTION
CONTAINER SYSTEMS
CONTENT
CONTRACTING
CONTRACTS
LOCAL CONTRIBUTION
RENT CONTROL
QUALITY CONTROL
CONTROL SYSTEMS
TRAFFIC CONTROL SYSTEMS
LAND USE CONTROLS
ARCHITECTURAL CONTROLS
CONTROLS
RECORDS CONTROLS
CONVENTION
CONVERSION
CONVERTING
DEVELOPER CONVENTION
CONVEYANCE
CONVEYANCES
CONVICTS
CONVICTIONS
CONVICTS
COOPERATIVES
COORDINATION
COORDINATORS
COORDINATION
COPING
COPING
COPYRIGHTS
COPYRIGHTING
CORRECTIONAL INSTITUTIONS
CORPORATE

COST-BENEFIT
COST-REVENUE
COST, STANDARD OF LIVING
COSTING
PROJECT COSTS
COSTS
COUNCIL-MANAGER PLAN
REGIONAL COUNCILS
COMMUNITY COUNCILS
ANTI-POVERTY COUNCILS
COUNCILS OF GOVERNMENT
COUNTIES
UNDERDEVELOPED COUNTRIES
BY COUNTY
COUNTY
COUNTY GOVERNMENT
COUNTY PLANNING
COUNTY-MUNICIPAL
GOLF COURSES
COURTS
COVENANTS
CPM
CREDIT
CRITIQUE
GRADE CROSSINGS
CROSSINGS
CRP
CRP APPLIC
CRP REPORT
CUE LIBRARY
CUL DE SAC
CULTURAL ACTIVITIES
CULVERTS
CURRICULA
BUSINESS CYCLES
BUILDING CYCLES
CYCLICAL
DAMS
DATA
DATA BANKS
DATA PROCESSING
DATA SOURCES
DATES
DAY-CARE
DAYLIGHT
CUL DE SAC
DEAD LAND
DEBT
DECENTRALIZATION
DECISION MAKING
JUDICIAL DECISIONS
RURALS, DECORATIONS
CIVIL DEFENSE
DEFENSE
DEFENSE WORKERS
DEFICIENCIES
HOUSING DEMAND
MASS TRANSP. DEMO REPORTS
DEMOCRACY
DEMOGRAPHIC FACTORS
DEMOGRAPHY
DEMOLITION
DEMOLITION ASSIST
DEMONSTRATION CITIES
DEMONSTRATION PLANNING
DEMONSTRATION REPORTS
DEMONSTRATIONS
DENSITY
DENTAL SERVICES
DEPARTMENT STORES
DEPLETED AREAS
DEPRECIATION
DEPRESSED AREAS
DEPRESSED CONSTRUCTION
DESALINATION
DESIGNER DESIGN
DOE DESIGN
ARCHITECTURAL DESIGN
ENVIRONMENTAL DESIGN
DESIGNS
URBAN DESIGN
DESIGN GUIDES
DESIGN STANDARDS
DESIGNATION
DESK
DESTRUCTION
DETAIL AREA
DETAILING
DETAILING
WORK DETAILING
DETAILING
DETAILING

ECONOMIC DEVELOPMENT
URBAN DEVELOPMENT
RESEARCH AND DEVELOPMENT
SOCIAL DEVELOPMENT
UNCONTROLLED DEVELOPMENT
DEVELOPMENT CORPORATIONS
DEVELOPMENT MANAGEMENT
DEVELOPMENT PLANS
DEVELOPMENTS
DEVELOPMENTS (CONT)
DICTIONARIES, THESAURI
DIRECT
HUD DIRECTIVE
CITY DIRECTORIES
DIRECTORIES
DISASTER PROJECTS
DISASTER SERVICES
DISASTERS
DISCOUNT RATE
DISCOUNT STORES
DISINVESTMENT
DISPLACED PERSONS
GRAPHIC DISPLAYS
REFUSE DISPOSAL
SOLID WASTE DISPOSAL
LAND DISPOSITION
DISSERTATIONS
DISTRIBUTION
CONGRESSIONAL DISTRICTS
SPECIAL DISTRICTS
SCHOOL DISTRICTS
ZONING DISTRICTS
DIVERSIFICATION
DOCUMENTATION
SYSTEMS DOCUMENTATION
EMINENT DOMAIN
DOT
DRAA.LP
DRAFTING
DRAINAGE
ARCHITECTURAL DRAWINGS
EATING, DRINKING PLACES
DROPOUTS
DUE PROCESS
MULTIPLE DWELLINGS
DYNAMIC PROCESS
GROUP DYNAMICS
EASEMENTS
EATING, DRINKING PLACES
ECOLOGICAL STUDIES
ECOLOGY
ECONOMETRICS
ECONOMIC
ECONOMIC BASE
ECONOMIC BASE STUDIES
ECONOMIC CONDITIONS
ECONOMIC DEVELOPMENT
ECONOMIC FACTORS
ECONOMIC GEOGRAPHY
ECONOMIC OPPORTUNITY
ECONOMIC PLANNING
ECONOMIC POLICY
ECONOMIC SECURITY
HOUSING ECONOMICS
LAND ECONOMICS
REGIONAL ECONOMICS
ECONOMICS
TRANSPORTATION ECONOMICS
URBAN ECONOMICS
ECONOMISTS
EDUCATIONAL
PLANNING EDUCATION
ADULT EDUCATION
EDUCATION
EDUCATIONAL
EDUCATIONAL ATTAINMENT
EDUCATIONAL FACILITIES
EDUCATIONAL POOLS
EFFECTS
ADMISSION TAX
ELDERLY
ELDERLY
ELECTRONIC
ELECTRONIC
ELEMENTARY
ELEMENTARY SCHOOLS
ELEVATORS
EMINENT DOMAIN

PUBLIC EMPLOYEES
EMPLOYMENT
EMPLOYMENT SERVICES
ENABLING
ENCLOSED
ENCYCLOPEDIAS
NUCLEAR ENERGY
SOLAR ENERGY
LAW ENFORCEMENT
CODE ENFORCEMENT
CODE ENFORCEMENT ASSIST
ENGINEERING
TRAFFIC ENGINEERING
STRUCTURAL ENGINEERING
ENGINEERS
SCHOOL ENROLLMENT
ENTERTAINMENT
SERIAL ENTRIES
AGENCY ENTRY
ENTRY
URBAN ENVIRONMENT
ENVIRONMENTAL DESIGN
ENVIRONMENTAL PROTECTION
EQUAL OPPORTUNITIES
EQUALIZATION
EQUALIZATION RATE
BUILDING EQUIPMENT
FURNITURE, EQUIPMENT
TRANSPORT EQUIPMENT
EQUITY
EROSION
FIRE ESCAPES
REAL ESTATE BUSINESS
ETHICS
ETHNIC CENTERS
ETHNICITY
EVALUATION
EVICTION
RENEWAL EXECUTION
EXECUTIVES
TAX EXEMPTIONS
EXHIBITION HALLS
NATURE EXHIBITS
EXHIBITS
EXPENDITURES
EXPERIMENTAL
EXPRESSWAYS
EXTENSION SERVICES
MINING AND EXTRACTING
HEALTH FACILITIES
RECREATIONAL FACILITIES
POLICE FACILITIES
PARKING FACILITIES
PUBLIC FACILITIES
COMMUNITY FACILITIES
FIRE FACILITIES
GROUP HEALTH FACILITIES
EDUCATIONAL FACILITIES
COMMUNITY FACILITIES PLANS
FACTOR ANALYSIS
FACTORIES
HUMAN FACTORS
ECONOMIC FACTORS
GEOGRAPHIC FACTORS
FALLOUT SHELTERS
FAMILIES
FAMILY ALLOWANCES
FAMILY INCOME
FAMILY PLANNING SERVICES
FAMILY SIZE
FARMS
FEASIBILITY
FEASIBILITY STUDIES
ARCHITECTURAL FEATURES
OLMSTEDIAN FEATURES
CONSTRUCTION FEATURES
FEDERAL
FEDERAL AID
FEDERAL GOVERNMENT
FEDERAL HOUSE
FEDERAL LAND
FEDERAL LOAN
FEDERAL PROGRAMS
FEDERAL STATE RELATIONS
FEE
FEES
FEES
FELONIES
FEMALE OFFENDERS
FEMALES

PUBLIC FINANCE
FINANCE
STATE FINANCE
FINANCIAL ASSISTANCE
FINANCIAL ASSISTANCE (CONT)
FINANCIAL PROGRAMMING
FINANCIAL SOURCES
MORTGAGE FINANCING
FINANCING
FINANCING CHARGES
FIRE ESCAPES
FIRE FACILITIES
FIRE INSURANCE
FIRE PREVENTION
FISCAL PLANNING, POLICY
HUNTING, FISHING
FISHING INDUSTRY
FLEXIBLE
FLOOD PLAINS
FLOOD PLAINS ZONING
FLOOD PROTECTION
FLOOR AREA RATIO
FLOOR SPACE AREA
FLOORSCAPE
FNMA
FOOD SUPPLY
LABOR FORCE
FORECASTING
FORECASTS
FORECLOSURES
FORESTS, FORESTRY
FORESTS, FORESTRY
URBAN FORM
URBAN FORM (CONT)
FORMATS
FORMATS (CONT)
FORMATS (CONT)
FORMATS (CONT)
FORMS
FOUNDATION PARTICIPATION
BASEMENTS, FOUNDATIONS
FRANCHISES
FREIGHT
FRINGE AREAS
FRINGE BENEFITS
FRONTAGE
FUEL
SOCIAL FUNCTIONS
PENSION FUNDS
FUNDS
REAL ESTATE FUNDS
STREET FURNITURE
FURNITURE, EQUIPMENT
GAMING, GAME THEORY
GAMING, GAME THEORY
GARAGES
GARDEN APARTMENTS
GARDEN CITIES
HISTORICAL GARDENS, ARCHITECTURE
GAS
GIS
GEOGRAPHERS
GEOGRAPHIC IDENTIFICATION
GEOGRAPHIC GEOGRAPHY
GEOGRAPHY
LABOR GEOGRAPHY
GEOLOGICAL HAZARDS
GHETTOS
GIFTS
ELECTRONICS
GOOD
GOOD WORLDS
GOALS
GOLF COURSES
[illegible]
[illegible]
[illegible]

HUNTING, FISHING
HYDROFOILS
PERSON IDENTIFICATION
GEOGRAPHIC IDENTIFICATION
ILLUMINATION
IMAGE
IMPACT
IMPACTED AREAS
IMPLEMENT
PLAN IMPLEMENTATION
IMPROVED LAND
PROPERTY IMPROVEMENT
COMMUNITY IMPROVEMENT
BUSINESS IMPROVEMENT
PUBLIC IMPROVEMENTS
CAPITAL IMPROVEMENTS
IN-CITY
IN-SERVICE TRAINING
INCENTIVES
TAX INCENTIVES
INCINERATION
INCOME
NATIONAL INCOME
FAMILY INCOME
INCOME TAX
INCOME TAX AIDS
INCOME-LEVEL
INCORPORATION
MINING AND EXTRACT IND
INPUT INDEX
INDEXES
INDEXING
INDIANS
INDICATORS
INDIRECT
INDUSTRIAL
INDUSTRIAL AREAS
INDUSTRIAL DEVELOPMENT
INDUSTRIAL LOCATION
INDUSTRIAL PARKS
INDUSTRIAL WASTE
INDUSTRIALIZATION
TEXTILE INDUSTRIES
INDUSTRY
PETROLEUM INDUSTRY
CONSTRUCTION INDUSTRY
BUILDING INDUSTRY
FISHING INDUSTRY
STEEL INDUSTRY
INFLATION
STANDARDS INFORMATION
INFORMATION CENTERS
INFORMATION SCIENTISTS
INFORMATION SYSTEMS
INFRASTRUCTURE
INLYING
INNOVATION
INPUT INDEX
INPUT-OUTPUT
INSPECTION
INSTALLMENT FINANCE
INSTITUTIONAL
CORRECTIVE INSTITUTIONS
INSULATION
MORTGAGE INSURANCE
FIRE INSURANCE
INSURANCE COMPANIES
INSURANCE RATES
INTEGRATION
INTENSITY
LAND USE INTENSITY
INTERAGENCY
INTERCHANGES
INTERDISCIPLINE
INTEREST
LOCAL INTEREST
PUBLIC INTEREST GROUPS
[illegible]
[illegible]
[illegible]
-[illegible]
[illegible]
[illegible]

PERIODICAL LISTS
ACQUISITIONS LISTS
LITTER
LIVABILITY
COST, STANDARD OF LIVING
LIVING REQUIREMENTS
LOADING ZONES
BUILDING AND LOAN ASSOCIATIONS
LOAN, GRANT APPLIC
LOANS
LOW-COST LOANS
LOBBYING
LOCAL
LOCAL CITY HALLS
LOCAL CONTRIBUTION
LOCAL GOVERNMENT
LOCATION
INDUSTRIAL LOCATION
RESIDENTIAL LOCATION
LOCATION THEORY
LOFTS
LONG-DISTANCE
LOT SIZE
LOTS, PARCELS
LOW-COST HOUSING
LOW-COST LOANS
LOW-INCOME
LOW-INTEREST
LOW-RENT HOUSING
LPA
LUMBERING
TEACHING MACHINES
VENDING MACHINES
MACROECONOMICS
HIGHWAY MAINTENANCE
MAINTENANCE CODES
DECISION MAKING
MALLS
MAN
MANAGEMENT
RECORDS MANAGEMENT
PROPERTY MANAGEMENT
DEVELOPMENT MANAGEMENT
SYSTEMS MANAGEMENT
WASTE MANAGEMENT
MANAGEMENT SCIENCE
CITY MANAGER PLAN
MANPOWER
MANUAL SYSTEMS
MANUALS
STYLE MANUALS
MANUFACTURING
MAPPING
MAPS
OFFICIAL MAPS
BASE MAPS
MARINAS
MARINE TRANSPORT
MARITIME
MARKET
MARKET ECONTI
MARKET ANALYSES
LAND USE, MARKET SURVEY
MARKET VALUE
MARKETING
MARKETS
MARRIAGE
MASS TRANSP, COMP REPORTS
MASS TRANSPORTATION
MASTER PLANS
MATHEMATICAL ANALYSES
MATRIX
OCCU MCCUPANCY
MCCUPANCIES
MCCUPATIONAL CENTERS
MCCUPATIONAL SERVICES
OLDS MCCUPANT
MCDELLING
MCDELLING SYSTEMS
MCDERN HOUSE
MCDERN HOUSE DESIGNS
MCDIFIED
MCDULAR CONSTRUCTION
ENVIRONMENTAL MCISTURE
MCLDS
MCLDED PLASTICS
MCLECULES
MCLECULES (MATH)
MCMENT OF INERTIA
LEGAL MONEY
ECONOMIC-REGION MONOPOLIES
MCNTHLY
MCNUMENTS
MCRAL
MCRTGAGE FINANCING
MCRTGAGE INSURANCE
MCRTGAGES
MOTELS, MCTELS
MCTHERS
MCVING PLATFORMS
MULTI-FAMILY
MULTI-PURPOSE
MULTIPLE DWELLINGS
MUNICIPAL
MUNICIPAL BONDS
MUNICIPAL FINANCE
MUNICIPAL GOVERNMENT
MUNICIPAL LEAGUES
MURALS, DECORATIONS
MUSEUMS
NATIONAL
NATIONAL INCOME
NATIONAL PARKS
NATIONAL PLANNING
NATIVITY
NATURAL
NATURAL RESOURCES
NATURAL RESOURCES (CONT)
NATURE EXHIBITS
NEGROES
NEIGHBORHOOD ANALYSES
NEIGHBORHOOD LEVEL PROG
NEIGHBORHOOD PARKS
NEIGHBORHOOD SERVICE CENTER
MODEL NEIGHBORHOODS
NEIGHBORHOODS
NET
NETWORKS
NEW COMMUNITIES
NEW TOWN-IN TOWN
NEW TOWNS
NEWS BOOPS
NEWSLETTERS
NEWSPAPERS
NICES
NON-ASSISTED
NON-CASH
NON-CIVIL SERVICE
NON-CONFORMING
NON-PARTICIPATING
NON-PROFESSIONAL
NON-PROFIT
NON-PROFIT HOUSING
NON-RESIDENTIAL
NON-URBAN
NORTH
NUCLEAR ENERGY
NUISANCES
NUMERICAL DENSITY
NURSING HOMES
LINEAR
OBSOLESCENCE
OBSOLESCENCE-REGION
OCCUPANCY
OCCUPANCY-REGION
OCCUPATIONS
OCEAN
OCEANOGRAPHY
OFFICE
OFFICE BUILDING
OFFICE SPACE

ON-LINE
ON-STREET
OPEN HOUSING
OPEN SPACE
OPEN SPACE PLANS
OPEN SPACE RATIO
OPERATIONS RESEARCH
PUBLIC OPINION
EQUAL OPPORTUNITIES
ECONOMIC OPPORTUNITY
ZONING ORDINANCES
ADMINISTRATIVE ORGANIZATION
ORGANIZATION CHARTS
COMMUNITY ORGANIZATIONS
ORIGIN//DESTINATION
OUTDOOR RECREATION
OUTLYING
OUTWARD
OVERCROWDING
OVERHANG
OWNER-BUILT
OWNER-OCCUPANCY
LAND OWNERSHIP
HOME OWNERSHIP
INVESTOR OWNERSHIP
SLUM OWNERSHIP
HOME OWNERSHIP PROGRAMS
LOTS, PARCELS
PARKING
PARKING FACILITIES
NATIONAL PARKS
INDUSTRIAL PARKS
PARKS
NEIGHBORHOOD PARKS
EDUCATIONAL PARKS
STATE PARKS
VESTPOCKET PARKS
PARKWAYS
PART I
PART II
CITIZEN PARTICIPATION
FOUNDATION PARTICIPATION
PATENTS
SOCIAL PATHOLOGY
PATHS
PATIO HOUSES
PAYMENTS
PEAK PERIODS
PEDESTRIANS
PEDESTRIANWAYS
PENSION FUNDS
PER CAPITA
PERFORMANCE
PERFORMANCE STANDARDS
PERFORMING ARTS
PERIODIC REPORTS
PERIODICAL LISTS
PERS PERIODS
PLOTTING PURPOSE
PERSON IDENTIFICATION
PERSONAL
PERSONAL PROPERTY
DISPLACED PERSONS
PERT
PESTS
PETROLEUM INDUSTRY
PHA
[illegible]
[illegible]
[illegible]

PLANNING PROCESS
DYNAMIC PROCESS
DUE PROCESS
DATA PROCESSING
RESOURCE PRODUCTION
PRODUCTIVITY
CHEMICALS, ALLIED PRODUCTS
APPAREL, RELATED PRODUCTS
PLANNING PROFESSION
PROFESSIONS
LIMITED PROFIT
PROFIT
NEIGHBORHOOD DEVEL PROG
MODEL CITIES PROGRAM
WORKABLE PROGRAM
WORKABLE PROGRAM APPLIC
PROGRAM STANDARDS
PROGRAMMED LEARNING
PROGRAMMING
FINANCIAL PROGRAMMING
HOME OWNERSHIP PROGRAMS
HOUSING PROGRAMS
INTERGOVERNMENTAL PROGRAMS
POVERTY PROGRAMS
RECREATION PROGRAMS
ACTION PROGRAMS
APPRENTICESHIP PROGRAMS
AREA SERVICES PROGRAMS
TRAINING PROGRAMS
STATE PROGRAMS
PROJECT COSTS
PROJECT PLANNING
POPULATION PROJECTIONS
JOINT PROJECTS
RESEARCH PROJECTS
AIR RIGHTS PROJECTS
DISASTER PROJECTS
PERSONAL PROPERTY
PROPERTY IMPROVEMENT
REAL PROPERTY LAW
PROPERTY MANAGEMENT
PROPERTY PROTECTION
REAL PROPERTY TAXES
PROPERTY VALUES
PROPERTY PROTECTION
ENVIRONMENTAL PROTECTION
FLOOD PROTECTION
PROTEST ACTION
PSYCHOLOGICAL
PSYCHOLOGY
PUBLIC
PUBLIC ADMINISTRATION
PUBLIC BUILDINGS
PUBLIC EMPLOYEES
PUBLIC FACILITIES
PUBLIC FINANCE
PUBLIC HEALTH
PUBLIC HOUSING
PUBLIC IMPROVEMENTS
PUBLIC INTEREST GROUPS
PUBLIC LAND
PUBLIC OFFICIALS
PUBLIC OPINION
PUBLIC RELATIONS
PUBLIC SAFETY
PUBLIC SECTOR
PUBLIC WELFARE
PUBLIC-PRIVATE SECTOR
PUBLICATION
PUBLICATIONS LISTS
PUBLISHING
PUBLISHING,
PUERTO RICANS
PURCHASE LAND SYSTEMS
PUPIL TRANSPORT
PURCHASE
PURPOSES
QUALITY CONTROL
QUARRYING
QUARTERS
QUARTZ
RACE RELATIONS
RACIAL-GENERATIONAL
RACISM
RADIO
RAILS RAILROADS
RAILROAD
RAILROAD,
RAILROADS
RAILROADS TRANSP
RAILS
RAILWAYS
RAISE TAXES
RAISING
RANCHES
RANGE
RANGELAND
RANGES
RATE
RATES
INSURANCE RATES
TAX RATES
RATIO
OPEN SPACE RATIO
FLOOR AREA RATIO
REAL ESTATE BUSINESS
REAL PROPERTY LAW
REAL PROPERTY TAXES
REAPPORTIONMENT
RECEIVERSHIP
RECLAMATION
RECORDS
RECORDS MANAGEMENT
RECREATION
OUTDOOR RECREATION
RECREATION AREAS
RECREATION PLANS
RECREATION PROGRAMS
RECREATIONAL FACILITIES
RECREATIONAL TRIPS
RECRUITMENT
REDEVELOPED LAND
REDEVELOPMENT CORP
SEE REFERENCES
REFERENDUM
REFINANCING
REFORMS
REFUSE DISPOSAL
REGIONAL
REGIONAL ACCOUNTS
REGIONAL COUNCILS
REGIONAL ECONOMICS
REGIONAL GOVERNMENT
REGIONAL PLANNING
REGIONAL SCIENCE
REGIONAL-LOCAL
REGIONS
SUBDIVISION REGULATIONS
REGULATORY
REHABILITATION
REHABILITATION AREAS
REHABILITATION ASSIST
REHABILITATION STANDARDS
REINSURANCE
RELATED
APPAREL, RELATED PRODUCTS
HUMAN RELATIONS
INTERGOVERNMENTAL RELATIONS
INTERNATIONAL RELATIONS
RACE RELATIONS
PUBLIC RELATIONS
COMMUNITY RELATIONS
PRESS RELEASES
RELIGIOUS ACTIVITIES
RELOCATION
RELOCATION STANDARDS
REMOTE SENSORS
RENEWAL
SOCIAL RENEWAL
RENEWAL AGENCY
RENEWAL AREAS
RENEWAL ASSIST
RENEWAL EXECUTION
RENEWAL PLANS
RENEWAL PLANNING
RENOVATION
RENT CONTROL
RENT SUPPLEMENTS
RENTAL HOUSING
REPTS
REPLACEMENT
EDP REPORT
UPDP REPORT
REPORTING
REPS REPUBLIC, CONG
REPUBLIC REPUBLIC
REPUBLIC REPUBLIC
REPUBLIC REPUBLIC
LEASING REQUIREMENTS
REQUIREMENTS
REQUIREMENTS
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED
REQUIRED

RESIDENTIAL LOCATION
RESORTS
HEALTH RESORTS
RESOURCE PRODUCTION
LAND RESOURCES
RESOURCES
NATURAL RESOURCES
AIR RESOURCES
GEOLOGICAL RESOURCES
WATER RESOURCES
NATURAL RESOURCES (CONT)
AIR RESOURCES PLANS
RESPONSIBILITY
RESTORATION
RETAIL SALES
RETAIL TRADE
RETIREMENT HOMES
REUSE
REUSE APPRAISALS
REVENUE SHARING
REVENUES
TAX REVENUES
REVERSE COMPUTING
JUDICIAL REVIEW
PLAN REVIEWS
REVIEWS
REVITALIZATION
PUERTO RICANS
RIGHT-OF-WAY
CIVIL RIGHTS
AIR RIGHTS
RIGHTS
AIR RIGHTS PROJECTS
RINGS
RIOTS
RIPARIAN
VERTICAL RISE AIRCRAFT
RIVER BASINS
RIVERS
ROADSIDES
COMPANY ROLE
ROOFS, ROOFING
ROOFS, ROOFING
ROOFS, ROOFING HOUSES
COMMUNITY ROOFS
ROOFS
ROOFS, ROOFING HOUSES
ROOM HOUSES
RURAL
RURAL AREAS
RURAL HOUSING
RURAL PLANNING
CLA OF SAC
PUBLIC SAFETY
SAFETY
SALARIES
SALE-LEASEBACK
SALES
RETAIL SALES
SALES TAX
SALVAGE
SAMPLING
SANITATION
SATELLITES
SAVINGS
SAVINGS BONDS
SCA
SCALE
SCALE MODELS
SCATTERED SITE HOUSING
SCHOOLS, [illegible]
[illegible]
[illegible]
[

HOUSING THE ELDERLY
THEATERS
LOCATION THEORY
COMMUNICATIONS THEORY
GAMING, GAME THEORY
THERMAL CONTROLS
DICTIONARIES, THESAURI
THESAURUS SOURCES
TRAVEL TIME
TIME-ZONING
TITLE I
SERIAL TITLES
TOPOGRAPHICAL FEATURES
TOURISM
NEW TOWN-IN TOWN
TOWN MEETINGS
NEW TOWN-IN TOWN
TOWNHOUSES
NEW TOWNS
CITIES, TOWNS
CITIES, TOWNS (CONT)
TOWNSHIPS
RACE TRACKS
CENSUS TRACTS
RETAIL TRADE
WHOLESALE TRADE
TRADE CENTERS
TRADE SCHOOLS
TRADE UNIONS
BUILDING TRADES
SERVICE TRADES
AIR TRAFFIC
TRAFFIC
TRAFFIC CONTROL SYSTEMS
TRAFFIC ENGINEERING
IN-SERVICE TRAINING
TRAINING PROGRAMS
TRANSIENT HOUSING
RAPID TRANSIT
MASS TRANSP. DEMO REPORTS
MARINE TRANSPORT
RAIL TRANSPORT
PUPIL TRANSPORT
AIR TRANSPORT
AIR-GROUND TRANSPORT
TRANSPORT EQUIPMENT
TRANSPORT SYSTEMS
TRANSPORT TECHNOLOGY
MASS TRANSPORTATION
TRANSPORTATION
TRANSPORTATION ECONOMICS
TRANSPORTATION MODELS
TRANSPORTATION PLANNING
TRANSPORTATION STUDY
TRAVEL TIME
TRAVELLER SERVICES
TREES
RECREATIONAL TRIPS
TRIPS
TRUCKS, TRUCKING
TRUCKS, TRUCKING
TUNNELS
TURNKEY
UNCONTROLLED DEVELOPMENT
UNDER CONSTRUCTION
UNDERDEVELOPED AREAS
UNDERDEVELOPED COUNTRIES
UNDERGROUND
UNDERPRIVILEGED
UNDEVELOPED
UNIFORM LEGISLATION
TRADE UNIONS
UNIONS
UNIQUE INTEREST
PLANNING UNIT
PLANNED UNITS
UNITS
COLLEGES, UNIVERSITIES
URBAN UNIVERSITIES
UP-POSTED
UPAP
UPAP REPORT
URBAN
URBAN AFFAIRS
URBAN ANTHROPOLOGY
URBAN AREAS
URBAN DESIGN
URBAN DEVELOPMENT
URBAN ECONOMICS
URBAN ENVIRONMENT
URBAN FORM
URBAN FORM (CONT)
URBAN GEOGRAPHY
URBAN HISTORY
URBAN OBSERVATORIES
URBAN PLANNING
URBAN PLANNING (CONT)
URBAN SOCIOLOGY
URBAN UNIVERSITIES
URBAN-RURAL
URBANITY
URBANIZATION
LAND USE
BEST USE
LAND USE (CONT)
USE CHANGES
LAND USE CONTROLS
LAND USE INTENSITY
LAND USE PLANS
LAND USE STUDY
USE TAX
USE VALUE
LAND USE, MARKET SURVEY
USED HOUSING
USER STUDIES
ACCESSORY USES
SPECIAL USES
UTILITIES
UTILITIES PLANS
SOCIAL UTILITY
UTILIZATION
UTOPIAS
VACANT LAND
VALUATION
MARKET VALUE
USE VALUE
LAND VALUES
PROPERTY VALUES
LAND VALUES (CONT)
VANDALISM
VARIANCES
AIR-CUSHIONED VEHICLES
VEHICLES
VENDING MACHINES
VERTICAL RISE AIRCRAFT
VESTPOCKET HOUSING
VESTPOCKET PARKS
VETERANS
VIADUCTS
VIOLATIONS
VISIBILITY
VISUAL AIDS
VISUAL ELEMENTS
VITAL STATISTICS
VOLUME
VOLUNTEER WORK
VOTING
WAGES
WALLS
WAREHOUSES
INDUSTRIAL WASTE
SOLID WASTE DISPOSAL
WASTE MANAGEMENT
WATER
WATER ALLOCATION
WATER POLLUTION
WATER RESOURCES
WATER SYSTEMS
WATERFRONTS
WATERSHEDS
WATERWAYS
PUBLIC WELFARE
SOCIAL WELFARE
WETLANDS
WHITES
WHOLESALE TRADE
STREET WIDENING
WILD LIFE
WILDERNESS AREAS
WINTER SPORTS
WOOD CONSTRUCTION
JOURNEY TO WORK
VOLUNTEER WORK
WORKABLE PROGRAM
WORKABLE PROGRAM APPLIC
MIGRATORY WORKERS
OLDER WORKERS
DEFENSE WORKERS
SOCIAL WORKERS
WORKING CLASS
WORKING CONDITIONS
WORKSHOPS
WRITE-DOWN
JUNK YARDS
YARDS
YEAR BOOKS, ALMANACS

YOUTH
LOADING ZONES
ZONES
FLOOD PLAINS ZONING
SPOT ZONING
ZONING
ZONING ADMINISTRATION
ZONING DISTRICTS
ZONING ORDINANCES
ZONING REQUIREMENTS
ZOOS